



Document Control No.: 4200-16-ACOI

**FINAL  
SITE INSPECTION REPORT  
INTERNATIONAL METALLURGICAL SERVICES  
NEWARK, NEW JERSEY**

**CERCLIS ID No.: NJD982273559**

Volume 1 of 2

May 28, 1993

Work Order No.: 04200-016-081-0002

Prepared for:

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

Prepared by:

**ROY F. WESTON, INC.**  
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4th Floor  
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Edison, New Jersey 08837

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Submitted by:

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Date

## SITE SUMMARY

The International Metallurgical Services (IMS) site (CERCLIS I.D. No. NJD982273559) consists of an inactive precious metals refining facility (Ref. Nos. 1; 7, p.1). It is located at 196 Blanchard Street in a commercial/industrial section of Newark, Essex County, New Jersey (Ref. Nos. 1-3; 7, p.1). See Figure 1, Site Location Map. The site property is 1.62 acres in size and is occupied by a four-story building measuring approximately 50 feet by 130 feet (Ref. Nos. 7, p.4; 11). The site is bordered to the north by the Passaic River, to the west by Blanchard Street, to the east by Norpack Corporation, and to the south by the Pigments and Colors Co. (Ref. No. 7, p.1). See Figure 2, Site Map.

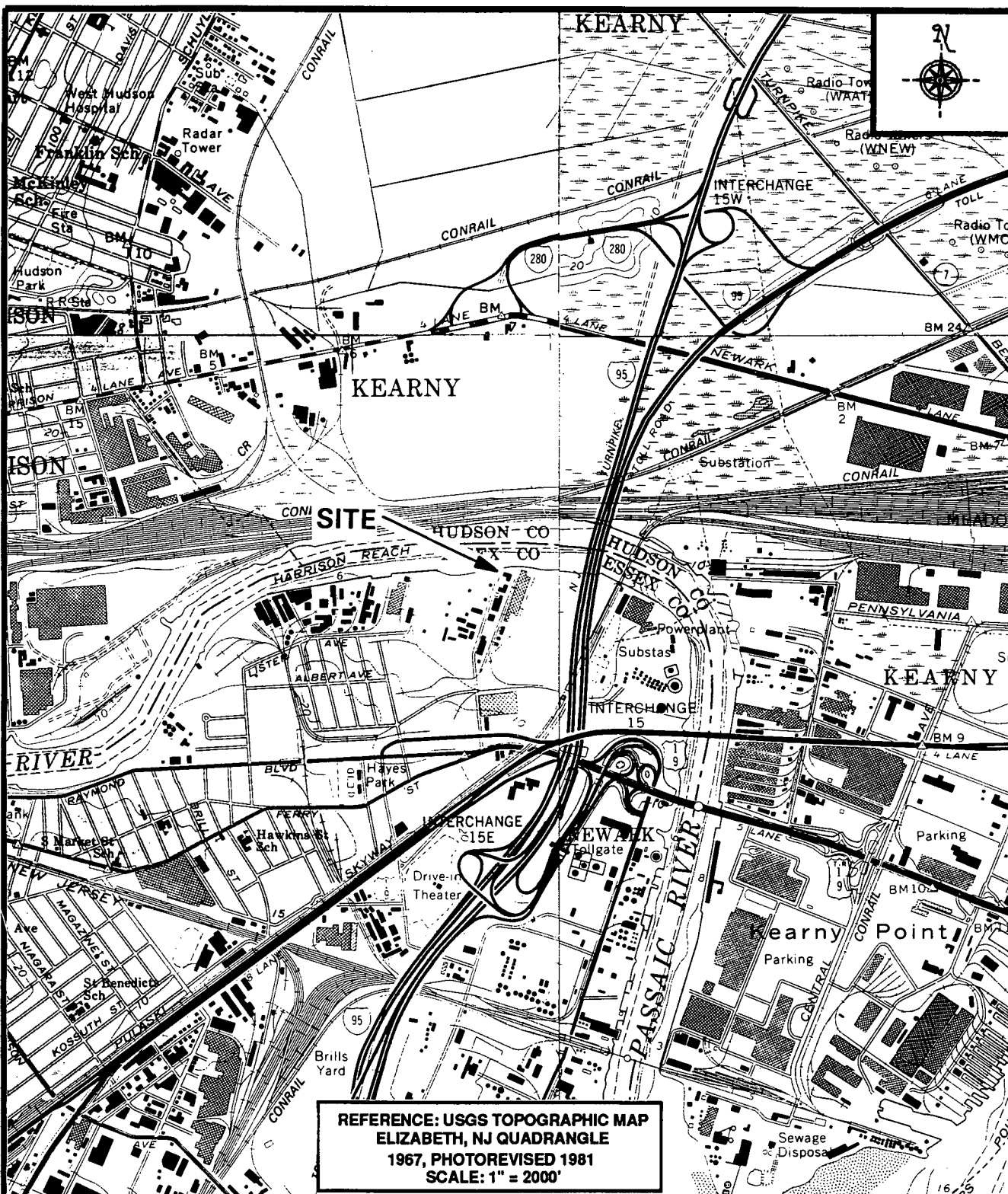
Between October 1979 and November 1984, the IMS site was used to recover silver from spent photographic film and gold from used electronic circuit boards. Medium grade gold was also refined to bullion grade (Ref. Nos. 2; 7, p. 14). The property was previously owned by Commercial Solvents Co. (CSC), whose operations and waste handling practices at the site are largely unknown. This site was reportedly used by CSC to produce ethanol (Ref. No. 10). IMS filed for bankruptcy in 1982 and the site was abandoned (Ref. No. 7, p. 14). After an inspection, the Newark fire department referred the site to the City of Newark and the New Jersey Department of Environmental Protection and Energy (NJDEPE; formerly NJDEP), who subsequently performed a preliminary site assessment. Numerous tanks, drums, and other containers (some leaking) were found, in addition to piles of spent photographic film (Ref. No. 7, p. 9). Because of the condition of the site, the City of Newark would not foreclose on the property for back taxes owed by IMS (Ref. No. 7, p. 14). The bankruptcy trustee was contacted by the NJDEPE concerning the threat posed by the site, but insufficient funds were available to perform any response actions. The NJDEPE inspected the site in May 1987 and subsequently requested that the U.S. Environmental Protection Agency (EPA) assume the lead role in the investigation (Ref. No. 7, pp. 21, 22). Soil samples were collected by the U.S. EPA at the end of 1987 and an Expedited Action Memorandum was signed, approving the removal of shock sensitive materials (Ref. No. 7, pp. 25, 26). All containerized wastes were subsequently removed from the site between April 1988 and July 1989 (Ref. No. 7, pp. 28-33). Wastes found at the site prior to the removal action included photographic film containing silver and cyanide, drums of metal powders, and various containers of acids, caustics, cyanide and other inorganic salts, organic solvents, asbestos, and miscellaneous organic compounds. Most of the above were located inside the facility building (Ref. Nos. 7, pp. 6, 7, 9, 18; 9; 10; 13; 16; 17).

On-site soils were found to contain various metals at concentrations exceeding those found in off-site locations and/or those of other on-site areas (Ref. No. 14). However, there are no residences within 200 feet of the site (Ref. Nos. 3, 8). There is no observed or suspected



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release of contaminants to groundwater, surface water, or air. There are no sensitive environments on or within 0.5 mile of the site (Ref. No. 41). The Passaic River and other downstream water bodies along the surface water migration pathway are used for fishing; however, there are no downstream drinking water intakes (Ref. Nos. 21, 39). Groundwater is not used as a drinking water supply source within four miles of the site (Ref. Nos. 3, 19).

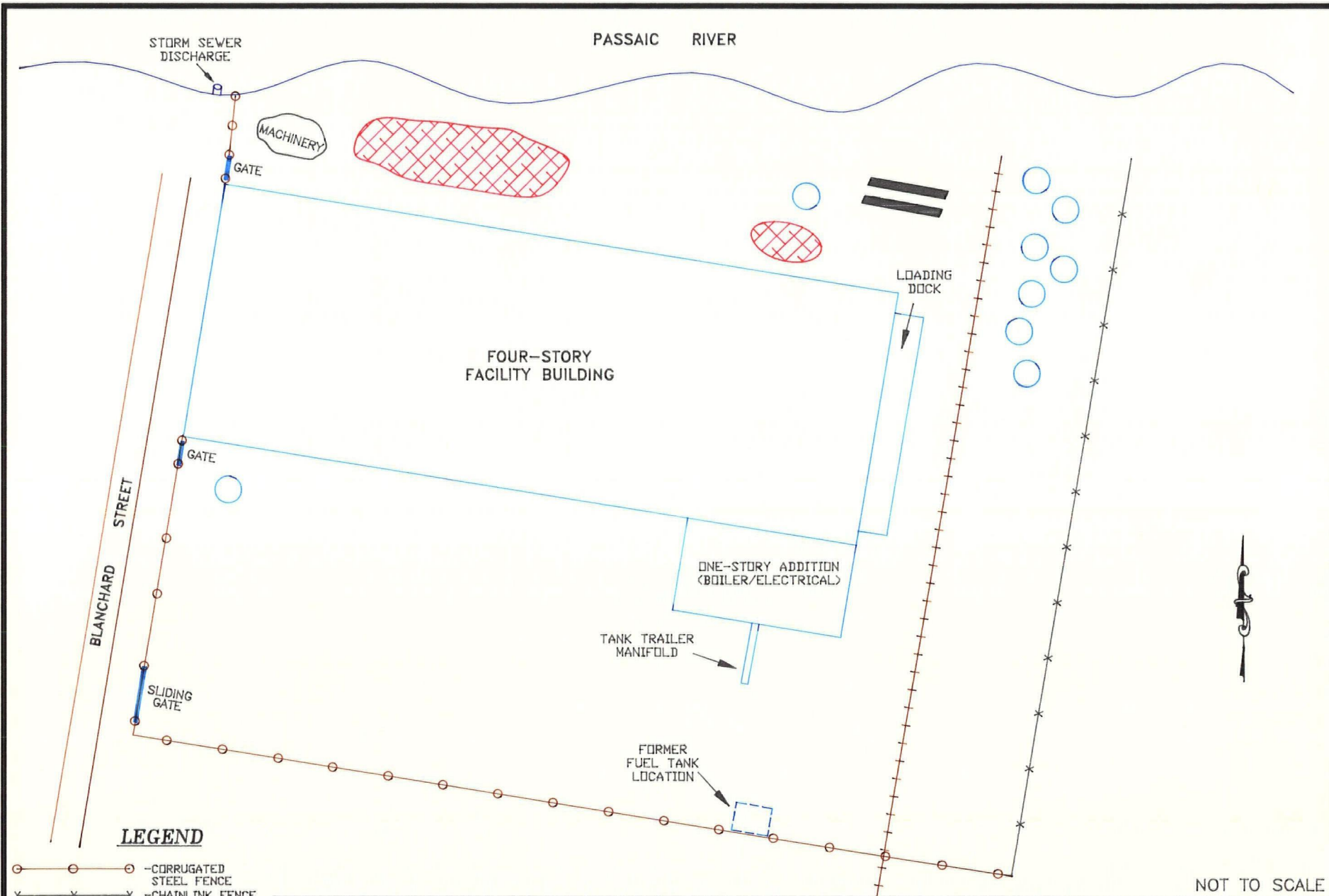


## SITE LOCATION MAP

### FIGURE 1

INTERNATIONAL METALLURGICAL  
SERVICES  
196 BLANCHARD STREET  
NEWARK, NJ

REVISION #: 0000 DATE: 05/24/93  
 FILE NAME: SITE-MAP.DWG DRAWN BY: J. DINIEN



# LEGEND

- CORRUGATED STEEL FENCE
- CHAINLINK FENCE
- RAILROAD
- FORMER FILM SCRAP PILE LOCATION
- SHIPPING CONTAINER
- TANK



PROJECT NAME:  
 INTERNATIONAL METALLURGICAL SERVICES  
 SCREENING SITE  
 INSPECTION  
 NEWARK, NEW JERSEY  
 CLIENT NAME:  
 UNITED STATES  
 ENVIRONMENTAL PROTECTION AGENCY

## SITE MAP

DATE:  
 05/26/93

FIGURE #:  
 2

NOT TO SCALE

## SITE ASSESSMENT REPORT: SITE INSPECTION

### PART I: SITE INFORMATION

1. Site Name/Alias International Metallurgical Services, Inc.  
 Street 196 Blanchard Street  
 City Newark State NJ Zip 07105
2. County Essex County Code 13 Cong. Dist. 10
3. CERCLIS ID No. NJD982273559
4. Block No. 50 Lot No. 5001
5. Latitude 40° 44' 18" N Longitude 74° 07' 40" W  
 USGS Quad. Elizabeth, NJ - NY
6. Owner Victor and Barbara Pannone Tel. No. Unknown  
 Street 46 Baltusrol Road  
 City Summit State NJ Zip 07901
7. Operator International Metallurgical Services, Inc. Tel. No. None  
 Street 196 Blanchard Street  
 City Newark State NJ Zip 07105
8. Type of Ownership  
☒ Private    ☐ Federal    ☐ State  
☐ County    ☐ Municipal    ☐ Unknown    ☐ Other
9. Owner/Operator Notification on File  
☐ RCRA 3001 Date \_\_\_\_\_ ☐ CERCLA 103c Date \_\_\_\_\_  
☒ None    ☐ Unknown
10. Permit Information  

Permit	Permit No.	Date Issued	Expiration Date	Comments
<u>None</u>	_____	_____	_____	_____
11. Site Status  
☐ Active    ☒ Inactive
12. Years of Operation Oct. 1979 to Nov. 1984

13. Identify the types of waste sources (e.g., landfill, surface impoundment, piles, stained soil, above- or below-ground tanks or containers, land treatment, etc.) on site. Initiate as many waste unit numbers as needed to identify all waste sources on site.

(a) Waste Sources

Waste Unit No.	Waste Source Type	Facility Name for Unit
1.	<u>Aboveground Tanks</u>	<u>Tanks</u>
2.	<u>Piles</u>	<u>Film Scrap Piles</u>
3.	<u>Drums</u>	<u>Drums</u>
4.	<u>Other</u>	<u>Facility Building</u>
5.	<u>Contaminated Soil</u>	<u>Contaminated Soil</u>
6.	<u>Non-Drum Containers</u>	<u>Pails</u>
7.	<u>Non-Drum Containers</u>	<u>Shipping Containers</u>

(b) Other Areas of Concern

Identify any miscellaneous spills, dumping, etc. on site; describe the materials and identify their locations on site.

A 1,000-gallon tank located in the southeast section of the site property is suspected of once containing fuel oil. This tank will not be evaluated in this report since unadulterated petroleum products are excluded under CERCLA/SARA. Also of concern is the tank trailer loading/unloading manifold, a potential source of solvent spills. This may have been used by the previous owner, Commercial Solvents Co.

Ref. Nos. 1-5, 7 (pp. 3, 5), 9, 10 (p. 4)

14. Information available from

Contact Juan Davila Agency U.S. EPA Tel. No. (212) 264-6669  
Preparer Thomas A. Varner Date May 28, 1993

## PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following items.

Waste Unit 1 - Tanks  
No. Facility Name for Unit

### Source Type

☐ Landfill ☐ Contaminated Soil  
☐ Surface Impoundment ☐ Pile  
☐ Drums ☐ Land Treatment  
☒ Tanks/Containers ☐ Other

### Description:

Seven rusted tanks that may have been used for process operations were observed in the northeast section of the site property during the on-site reconnaissance conducted by WESTON in February 1993. These tanks were previously described by the NJDEPE as "scrap tanks" and were presumably used inside the building. They are now thought to be empty. Supporting this is a U.S. EPA Removal Action Branch report which did not identify these tanks as a cause of discharge at the time of the removal action.

### Hazardous Waste Quantity

The capacity of these tanks is unknown.

### Hazardous Substances/Physical State

It is unknown what liquids were previously contained in these tanks. CERCLA-eligible hazardous substances possibly associated with this waste source are methanol, butylacetate, ethylacetate, and methylisobutyl ketone (MIBK). These liquids were possibly transferred to and from the tanks on the third floor of the facility building when the site was owned by the Commercial Solvents Co. Therefore, the seven tanks currently located outside the building may have previously contained these materials if they were located inside at one time.

Ref. Nos. 7 (pp. 3, 6, 15), 8, 9

## PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following items.

Waste Unit 2 - Film Scrap Piles  
No. Facility Name for Unit

### Source Type

<input type="checkbox"/> Landfill	<input type="checkbox"/> Contaminated Soil
<input type="checkbox"/> Surface Impoundment	<input checked="" type="checkbox"/> Scrap Pile
<input type="checkbox"/> Drums	<input type="checkbox"/> Land Treatment
<input type="checkbox"/> Tanks/Containers	<input type="checkbox"/> Other

### Description:

This waste source consists of piles of spent photographic film that was located on the northern side of the site property, between the building and the Passaic River. Although the reported distance varies among the available sources of background information, it is estimated that these piles were located 25 to 30 feet from the river bank. Sample analysis indicates that the film contained silver and cyanide. Since IMS is known to have processed spent film in order to recover silver, the piles must have accumulated between 1979 and 1984, the period during which IMS was in operation. No containment measures are known to have been implemented by IMS with regard to this waste source. These piles were drummed and removed by the U.S. EPA during March and April 1989. Since the waste was taken from the site to an approved facility prior to the date of this site inspection, the removal meets CERCLA eligibility.

### Hazardous Waste Quantity

The piles were shipped off site in 497 drums.

### Hazardous Substances/Physical State

The piles contained finely cut up spent photographic film (solid). A sample of the film was analyzed and found to contain silver and cyanide, both of which are CERCLA-eligible hazardous substances.

Ref. Nos. 7 (pp. 3, 14, 15, 64, 65), 9, 10 (p. 4), 13

**PART II: WASTE SOURCE INFORMATION**

For each of the waste units identified in Part I, complete the following items.

Waste Unit 3 - Drums  
No. Facility Name for Unit

**Source Type**

<input type="checkbox"/> Landfill	<input type="checkbox"/> Contaminated Soil
<input type="checkbox"/> Surface Impoundment	<input type="checkbox"/> Pile
<input checked="" type="checkbox"/> Drums	<input type="checkbox"/> Land Treatment
<input type="checkbox"/> Tanks/Containers	<input type="checkbox"/> Other

**Description:**

Two 30-gallon steel drums containing nickel powder were found on the eastside loading platform. These drums were originally in the facility building but were moved outside by vandals. Some of the nickel powder may have been spilled. Additionally, a partially decomposed fiber drum was found lying in the southwest portion of the property with its contents (a white crusty substance) spilled onto the ground. No secondary containment was used with regard to any of the drums found outside. The nickel powder was sent to the manufacturer or other industrial facility for recycling or reuse. The drum containing the unknown spilled material was presumably removed along with all of the other waste shipped off site, the last of which was shipped in July 1989. (This material was not observed during the on-site reconnaissance conducted by WESTON in February 1993.) Since the waste was taken from the site to an approved facility prior to the date of this site inspection, the removal meets CERCLA eligibility.

**Hazardous Waste Quantity**

The two drums contained a total of at least 600 pounds of nickel powder.

**Hazardous Substances/Physical State**

These drums contained nickel powder (solid).

Ref. Nos. 7 (pp. 15, 25, 32, 33, 54), 10

## PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following items.

Waste Unit 4 - Facility Building  
No. Facility Name for Unit

### Source Type

☐ Landfill ☐ Contaminated Soil  
☐ Surface Impoundment ☐ Pile  
☐ Drums ☐ Land Treatment  
☐ Tanks/Containers ☒ Other (Building)

### Description:

The sole structure at the site is a four-story concrete and brick building, approximately 50 feet by 130 feet in size. The building is essentially sound except for a hole in the roof. The first floor contained a laboratory, a warehouse, and office space. The laboratory housed over 50 containers ranging in size from several ounces to one gallon. Chemicals were also found scattered throughout the office area. The warehouse was found to contain three empty 400-gallon mixing vessels, another vessel possibly used for heat treatment, and other containers varying in size.

The second floor housed approximately 50 containers and drums along with two large mixing vessels. Container labels indicated that materials present on this floor included one drum of aluminum powder, four bottles of methyl ethyl ketone peroxide, nitric acid, sulfuric acid, sodium hydroxide, sodium cyanide, formic acid, paints and paint thinners.

The third floor was found to contain 42 empty tanks ranging in size from 5,000 to 8,000 gallons. Labels on the tank trailer loading/unloading manifold located outside of the building indicated that methanol, isopropanol, cellosolve, butyl acetate, ethyl acetate, MIBK and nitropropane may have been transferred to and from the third floor tanks. Containers ranging in capacity from 5 to 55 gallons were also found on this floor. Labels indicated that they contained nickel powder, zinc powder and peroxides.

The fourth floor housed containers of laboratory reagents ranging in size from 1 ounce to 30 gallons, in addition to a single, empty tank. Labels indicated that they contained phenols, vanadium pentoxide, sulfurous acid, mercuric iodide, ethyl acetate and pyridine.

All of the above wastes were removed by the U.S. EPA between April 1988 and July 1989. Since the waste was taken from the site to an approved facility prior to the date of this site inspection, the removal meets CERCLA eligibility. The building also contained over 400 linear feet of piping wrapped with asbestos-containing materials, which were removed in August 1989. Samples of dirt collected from all four floors of the building in March 1988 were found to contain various metals, including cadmium, copper, lead, and zinc. Air monitoring conducted in 1987 revealed the presence of hydrogen cyanide, sulfur dioxide, asbestos and unidentified organic compounds.

### Hazardous Waste Quantity

The total quantity of material containing CERCLA hazardous substances in this waste source is unknown. However, the following materials and quantities are known to have been present prior to the removal action conducted by the U.S. EPA:

hydrochloric acid	2 drums (1,000 lbs.)
nitric acid	1 drum (500 lbs.)
sodium cyanide	1 drum (500 lbs.)
potassium cyanide	1 drum (500 lbs.)
sulfuric acid	3 1-gallon bottles plus a 20-gallon keg (230 lbs.)
ammonium hydroxide	1 half-full drum (250 lbs.)
cyanide salt	1 pound
ammonium chloride	10 pounds
zinc dust	4 5-gallon pails (200 lbs.)

The hazardous waste quantity prior to the removal for this source (sum of the above) is 3,191 pounds.

### Hazardous Substances/Physical State

The following CERCLA hazardous substances were stored in the facility building or found in dirt collected from inside it:

methyl ethyl ketone peroxide	hydrochloric acid	asbestos
nitric acid	methanol	mercuric iodide
sulfuric acid	butyl acetate	chromic acid
sodium hydroxide	methyl isobutyl ketone	ammonium fluoride
sodium cyanide	potassium hydroxide	hydrogen cyanide
formic acid	ammonium hydroxide	ammonium acetate

nickel  
zinc  
vanadium pentoxide  
ethyl acetate  
chlorobenzene  
ammonium sulfide

ammonium chloride  
sodium chromate  
phenol  
methyl ethyl ketone  
ferric chloride  
cupric sulfate  
lead nitrate

copper cyanide  
cadmium  
copper  
lead  
dichlorobenzene  
4-methyl-2-pentanone

Ref. Nos. 7 (pp. 5-7, 9-13, 18, 21, 22, 24, 27-33, 38, 56), 9, 10, 13, 16, 17

## PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following items.

Waste Unit 5 - Contaminated Soil  
No. Facility Name for Unit

### Source Type

☐ Landfill ☒ Contaminated Soil  
☐ Surface Impoundment ☐ Pile  
☐ Drums ☐ Land Treatment  
☐ Tanks/Containers ☐ Other

### Description:

This waste source consists of 1.47 acres of potentially contaminated soil. Since site activities conducted by owners prior to IMS (e.g., Commercial Solvents Co.) are unknown, unpaved areas outside of the facility building may potentially be contaminated by organic solvents. Results of inorganic analyses for composite soil samples collected in October 1987 by the U.S. EPA TAT indicate the presence of beryllium (67 milligrams per kilogram [mg/kg]), mercury (5.4 mg/kg) and copper (990 mg/kg estimated). Although no designated background samples were collected, two composite samples were collected immediately south of the site from the Fine Pigments and Colors Company property. The samples were collected on December 21, 1987 by the U.S. EPA TAT. Beryllium was undetected (detection limit unknown) and copper was found at 171 mg/kg and 89.1 mg/kg, respectively, in the two samples. Mercury was present at 0.3 mg/kg and 0.6 mg/kg, respectively, in these off-site samples. No pesticides or polychlorinated biphenyls were found; the samples were not analyzed for volatile or semivolatile organic contaminants. During a removal action, roadstone was spread over the soil south of the building by the U.S. EPA in March 1988 to protect against disturbing contaminated soil.

### Hazardous Waste Quantity

A total of 1.47 acres of contaminated soil potentially exists at the site; the area of actual soil contamination is unknown.

### **Hazardous Substances/Physical State**

This waste source consists of soil (solid) possibly contaminated by beryllium, copper, mercury and organic solvents.

Ref. Nos. 7 (pp. 26, 28), 8, 12, 14, 15



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## PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following items.

Waste Unit 6 - Pails  
No. Facility Name for Unit

### Source Type

<input type="checkbox"/> Landfill	<input type="checkbox"/> Contaminated Soil
<input type="checkbox"/> Surface Impoundment	<input type="checkbox"/> Pile
<input type="checkbox"/> Drums	<input type="checkbox"/> Land Treatment
<input checked="" type="checkbox"/> Tanks/Containers	<input type="checkbox"/> Other

### Description:

This waste source consists of four 5-gallon pails of zinc powder formerly located on the eastside loading platform. Some of this material may have been spilled. These containers were originally found on the third floor of the facility building, but were subsequently moved down to the platform by vandals. No secondary containment was used in association with this waste source. The pails were presumably removed with all of the other waste shipped off site, the last of which was shipped in July 1989. Since the waste was taken from the site to an approval facility prior to the date of this site inspection, the removal meets CERCLA eligibility.

### Hazardous Waste Quantity

The total volume of this waste source is 20 gallons.

### Hazardous Substances/Physical State

This waste source contained zinc powder (solid).

Ref. Nos. 7 (pp. 15, 32, 33), 10

**PART II: WASTE SOURCE INFORMATION**

For each of the waste units identified in Part I, complete the following items.

Waste Unit 7 - Shipping Containers  
No. Facility Name for Unit

**Source Type**

<input type="checkbox"/> Landfill	<input type="checkbox"/> Contaminated Soil
<input type="checkbox"/> Surface Impoundment	<input type="checkbox"/> Pile
<input type="checkbox"/> Drums	<input type="checkbox"/> Land Treatment
<input checked="" type="checkbox"/> Tanks/Containers	<input type="checkbox"/> Other

**Description:**

Two 20 cubic yard shipping containers (no additional descriptive information available) were located in the northern portion of the site. A 1987 NJDEPE memorandum noted that one container was empty, while the other contained scrap circuit boards and two drums of unknown material. These wastes were presumably removed with all of the other waste shipped off site, the last of which was shipped in July 1989. Since it was taken from the site to an approved facility prior to the date of this site inspection, the removal meets CERCLA eligibility.

**Hazardous Waste Quantity**

Two drums or 100 gallons of waste were found in one of the shipping containers.

**Hazardous Substances/Physical State**

The contents and physical state of the drummed material are unknown.

Ref. Nos. 7 (pp. 32, 33), 9, 10

### PART III: SAMPLING RESULTS

#### EXISTING ANALYTICAL DATA

Composite surface soil samples were collected from four areas by the U.S. EPA Technical Assistance Team on October 28, 1987. These samples were analyzed for heavy metals, cyanide, pesticides, PCBs, and Extraction Procedure Toxicity. All analyses and quality assurance procedures were conducted by the U.S. EPA. Table 1 below presents selected results; see Reference No. 14 for the complete results and a sample location map.

TABLE 1: Selected Results for Soil Sampling Conducted October 28, 1987  
(All results in mg/kg)

<u>Hazardous Substance</u>	<u>Area 1</u>	<u>Area 2</u>	<u>Area 3</u>	<u>Area 4</u>
Arsenic	4.0	3.6	14	2.1
Beryllium	67	51	56	21
Copper	110	110	990J	69
Lead	272	200	570	190
Mercury	0.63	0.62	2.6	5.4

J - Indicates estimated value

Ref. No. 14

On December 21, 1987 the U.S. EPA TAT collected composite surface soil samples from two areas (Area 5 and Area 6) on the adjoining Fine Pigments and Colors Company property located south of the site. These samples were analyzed under the U.S. EPA Contract Laboratory Program for the presence of the same parameters as the on-site samples (see above). Table 2 below presents selected results; see Reference No. 15 for the complete results and Reference No. 7, p. 16, for a sample location map.

TABLE 2: Selected Results for Soil Sampling Conducted December 21, 1987  
(All results in mg/kg)

<u>Hazardous Substance</u>	<u>Maximum Concentration</u>
Arsenic	9.0
Beryllium	Not Detected*
Copper	171N
Lead	358J
Mercury	0.6

\* Detection limit unknown  
N, J - Indicate estimated values

Ref. No. 15

On March 14, 1988 the U.S. EPA Emergency Response Cleanup Services (ERCS) contractor collected samples of dirt from each of the four floors in the facility building and from the spent film piles on the north side of the property. These samples were analyzed by Wastex Industries, Inc. Table 3 below presents selected dirt sampling results; see Reference No. 13 for the complete results. Analysis of the spent film sample revealed the presence of silver and cyanide at 112 mg/kg and 1.78 mg/kg, respectively.

TABLE 3: Selected Results of Facility Building Dirt Sampling Conducted March 14, 1988  
(All results in mg/kg)

<u>Hazardous Substance</u>	<u>Concentration Range</u>
Arsenic	7.79 - 26
Beryllium	0.11 - 0.95
Cadmium	20.6 - 888
Copper	48 - 6,480
Cyanide	2.5 - 29
Lead	730 - 5,640
Mercury	2 - 25.6
Zinc	200 - 5,060

Ref. No. 13

During 1988 and 1989 samples were collected by the U.S. EPA ERCS contractor from drums of "bulked" wastes (wastes consolidated in drums, after compatibility testing, in preparation for removal) and analyzed for various disposal parameters by the Environmental Testing and Certification Corp. - Findlay Laboratory (Ref. No. 7, pp. 56, 57). Wastes were bulked according to the following generic categories: acid solid, acid liquid, flammable organic solid, flammable organic liquid, base/neutral solid, oxidizer solid, and peroxide solid. Solids (dirt) collected as a result of the final floor sweeping and two otherwise unidentified drummed waste samples (one solid, one liquid) are also analyzed. Finally, a sample of material from the pit used to remotely crush unknown wastes was also collected and analyzed. Selected results are listed below; for a complete listing of all results see Reference Nos. 24-34.

**Flammable Organic Solid (Incinerator Disposal Parameters)**

<u>Hazardous Substance</u>	<u>Concentration (mg/kg)</u>
Barium	4,700
Lead	448
Zinc	450

Ref. No. 26

**Flammable Organic Liquid (Incinerator Disposal Parameters)**

<u>Hazardous Substance</u>	<u>Concentration (mg/kg)</u>
Phenol	18,200

Ref. No. 27

**Floor Sweepings (Landfill Disposal Parameters)**

<u>Hazardous Substance</u>	<u>Concentration (mg/kg)</u>
Cyanide	4.56
Benzene Hexachloride (BHC - gamma)	0.053
4,4'-DDD	0.552
4-4'-DDE	0.205

4,4'-DDT 1.76  
Methoxychlor 0.492

Ref. No. 31

**Drummed Unknown Solid (Incinerator Disposal Parameters)**

<u>Hazardous Substance</u>	<u>Concentration (mg/kg)</u>	<u>Hazardous Substance</u>	<u>Concentration (mg/kg)</u>
Acetone	60.5	Naphthalene	31.6
m,p-Xylenes	9.49	2,4,6-Trichlorophenol	12.7
bis(2-Ethylhexyl)		Aroclor-1254	4.17
phthalate	1,050	Aroclor-1260	2.73
Butyl benzyl		Cadmium	35.6
phthalate	1,800	Chromium	409
Di-n-butyl phthalate	30.7	Lead	1,300
2,4-Dichlorophenol	45.3	Sodium	2,090
2,6-Dichlorophenol	10.0		
Fluorene	14.0		
Isophorone	169		
2-Methylnaphthalene	19.2		

Ref. No. 32

**Drummed Unknown Liquid (Incinerator Disposal Parameters)**

<u>Hazardous Substance</u>	<u>Concentration (mg/kg)</u>
Acetone	68.1
Isophorone	4,720
Sodium	2,440

Ref. No. 33

**Unknown Waste Crushing Pit (Landfill Disposal Parameters)**

<u>Hazardous Substance</u>	<u>Concentration (mg/kg)</u>
Cyanide	8.29
Chlorobenzene	191
Xylenes (total)	264
Di-n-butylphthalate	241
Phenol	353

Ref. No. 34

**SITE INSPECTION RESULTS**

Sampling was not conducted for this Site Inspection. Soil and wastes samples were collected at various times during the removal action conducted by the U.S. EPA between 1987 and 1989. All wastes were disposed of off site during that time.

Ref. Nos. 7 (pp. 27-33), 8, 14, 15, 24-34

**PART IV: HAZARD ASSESSMENT****GROUNDWATER ROUTE**

1. Describe the likelihood of a release of contaminant(s) to groundwater as follows: observed release, suspected release, or none. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For observed release, define the supporting analytical evidence.

A release to groundwater is not observed or suspected. No groundwater sample data is known to exist for this site (See Existing Analytical Data section of this report). No monitoring wells were observed on site during the WESTON reconnaissance conducted on February 9, 1993.

Ref. No. 10

2. Describe the aquifer of concern; include information such as depth, thickness, geologic composition, areas of karst terrain, permeability, overlying strata, confining layers, interconnections, discontinuities, depth to water table, groundwater flow direction.

The aquifer of concern is the Passaic Formation of the Newark Supergroup. The Passaic Formation corresponds to the pre-basaltic part of the unit formerly known as the Brunswick Formation. Within four miles of the site the Passaic Formation is used only for commercial and industrial supply, but it is the main source of groundwater in Essex County. Generally, the Passaic Formation consists predominantly of siltstone, sandstone, and conglomerate. It underlies most of Essex County and has a calculated total thickness of 6,000 meters (19,680 feet). The permeability of the water-bearing fracture zones is approximately  $10^{-4}$  centimeters per second (cm/s). In the southern part of the county east of the Watchung Mountains (where the site is located), the aquifer of concern consists locally of soft, red shale. Overlying bedrock in the area of the site are unconsolidated deposits of unstratified drift, known as till or ground moraine. Till consists of a heterogenous mixture of clay, silt, sand, gravel, cobbles, and boulders. The thickness of these unconsolidated deposits and therefore the depth to bedrock, is approximately 45 feet near the site. The permeability of till is approximately  $10^{-6}$  to  $10^{-8}$  cm/s. The depth of the water table near the site is unknown; however, due to the proximity of the Passaic River, it is expected to be less than 20 feet. Local groundwater flow is expected to be north toward the Passaic River.

Ref. Nos. 3, 35, 36 (pp. 25, 29), 37

3. Is a designated well head protection area within 4 miles of the site?

Currently there are no designated well head protection areas in New Jersey.

Ref. No. 18

4. What is the depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer of concern?

Piles of scrap film containing silver and cyanide were stored on the ground surface. The depth to the top of the Passaic Formation (assumed to be saturated) is 45 feet. Therefore, the depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer of concern is 45 feet.

Ref. Nos. 7 (p. 3), 14, 15, 35

5. What is the permeability value of the least permeable continuous intervening stratum between the ground surface and the aquifer of concern?

Unconsolidated deposits of till comprise the intervening stratum between the ground surface and the Passaic Formation. The permeability of till is  $10^{-6}$  to  $10^{-8}$  cm/s.

Ref. Nos. 35, 37

6. What is the distance to and depth of the nearest well that is currently used for drinking purposes?

There are no wells located within 4 miles of the site that are currently used for drinking purposes.

Ref. Nos. 3, 19

7. If a release to groundwater is observed or suspected, determine the number of people that obtain drinking water from wells that are documented or suspected to be located within the contamination boundary of the release.

A release to groundwater is not observed or suspected; refer to question 1.

8. Identify the population served by wells located within 4 miles of the site that draw from the aquifer of concern and all overlying aquifers.

<u>Distance</u>	<u>Population</u>
0- $\frac{1}{4}$ mi	0
> $\frac{1}{4}$ - $\frac{1}{2}$ mi	0
> $\frac{1}{2}$ - 1 mi	0
> 1 - 2 mi	0
> 2 - 3 mi	0
> 3 - 4 mi	0

State whether groundwater is blended with surface water or with groundwater from other wells. Also provide an explanation on how each ring population was determined.

Groundwater is not used as a drinking water supply source within 4 miles of the site.

Ref. Nos. 3, 19, 38

9. Identify uses of groundwater within 4 miles of the site (i.e., private drinking source, municipal source, commercial, irrigation, unusable).

Groundwater withdrawn from within 4 miles of the site is used for commercial and industrial supply only.

Ref. Nos. 3, 19, 38

**SURFACE WATER ROUTE**

10. Describe the likelihood of a release of contaminant(s) to surface water as follows: observed release, suspected release, or none. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For observed release, define the supporting analytical evidence.

A release to surface water is not observed or suspected. No samples are known to have been collected from the adjacent Passaic River with respect to this site (See Existing Analytical Data section of this report). No sampling was conducted at this site by WESTON.

Ref. No. 10

11. Identify the nearest downslope surface water. If possible, include a description of possible surface drainage patterns from the site.

The nearest downslope surface water is the Passaic River, which forms the northern property boundary of the site. Overland surface drainage from the site would discharge directly into the Passaic River.

Ref. Nos. 3, 8

12. What is the distance to the nearest downslope surface water? Measure the distance along a course that runoff can be expected to follow.

The Passaic River lies adjacent to the site, forming its northern property boundary.

Ref. No. 3.

13. Determine the type of floodplain that the site is located within.

The site lies within a 100-year floodplain.

Ref. No. 20

14. Identify drinking water intakes in surface waters within 15 miles downstream of the site. For each intake identify: the distance from the point of surface water entry, population served, and stream flow at the intake location.

<u>Intake</u>	<u>Distance</u>	<u>Population Served</u>	<u>Flow (cfs)</u>
---------------	-----------------	--------------------------	-------------------

There are no surface water intakes within 15 miles downstream of the site. All water bodies along the surface water migration pathways are saline and are not designated as usable for drinking water.

Ref. Nos. 21-23

15. Identify fisheries that exist within 15 miles downstream of the point of surface water entry. For each fishery specify the following information:

<u>Fishery Name</u>	<u>Water Body Type</u>	<u>Flow (cfs)</u>	<u>Saline/Fresh/Brackish</u>
Passaic River	River	1,154	Saline
Newark Bay	Coastal Tidal Waters	Not Applicable	Saline
Arthur Kill	Coastal Tidal Waters	Not Applicable	Saline
Kill Van Kull	Coastal Tidal Waters	Not Applicable	Saline
Upper Bay/ The Narrows	Coastal Tidal Waters	Not Applicable	Saline

Ref. Nos. 21, 39, 40

16. Identify sensitive environments that exist within 15 miles downstream of the point of surface water entry. For each sensitive environment specify the following:

<u>Environment</u>	<u>Water Body Type</u>	<u>Flow (cfs)</u>	<u>Wetland Frontage (miles)</u>
Wetlands	Coastal Tidal Waters	Not Applicable	1.8
Endangered Species Habitat (State Listed)	Coastal Tidal Waters	Not Applicable	

Ref. Nos. 21, 41

17. If a release to surface water is observed or suspected, identify any intakes, fisheries, and sensitive environments from question Nos. 14-16 that are or may be located within the contamination boundary of the release.

A release to surface water is not observed or suspected; refer to question 10.

Intake: Not applicable

Fishery: Not applicable

Sensitive Environment: Not applicable

#### **SOIL EXPOSURE PATHWAY**

18. Determine the number of people that occupy residences or attend school or day care on or within 200 feet of the site property.

The site is located in a highly industrialized section of Newark, New Jersey; there are no residences, schools or day care centers within 200 feet of the site property.

Ref. Nos. 3, 8

19. Determine the number of people that work on or within 200 feet of the site property.

There are no workers at the site since it is currently inactive. The number of off-site workers within 200 feet of the site property is unknown; however, it is estimated that there are less than 100.

Ref. Nos. 3, 7 (p. 14), 8

20. Identify terrestrial sensitive environments on or within 200 feet of the site property.

No terrestrial sensitive environments are known to exist within 200 feet of the site property. The site is located in an industrial section of Newark, New Jersey.

Ref. Nos. 3, 8

## AIR ROUTE

21. Describe the likelihood of release of contaminants to air as follows: observed release, suspected release, or none. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For observed release define the supporting analytical evidence.

There is no observed or suspected release of contaminants to air. IMS is known to have used the site for the refining of precious metals. On-site soil samples were found to contain elevated levels of arsenic, beryllium, copper, lead, and mercury with respect to other on-site and/or off-site soils. However, roadstone was spread over the soil south of the facility building as a containment measure. Air monitoring conducted inside the facility building revealed the presence of hydrogen cyanide, sulfur dioxide, asbestos, and unidentified organic compounds. However, all wastes have since been removed from inside the building.

Ref. Nos. 7 (pp. 27-33), 10, 14, 15

22. Determine populations that reside within 4 miles of the site.

<u>Distance</u>	<u>Population</u>
On Site	0
> 0-¼ mi	240
> ¼ - ½ mi	120
> ½ - 1 mi	4,680
> 1 - 2 mi	51,430
> 2 - 3 mi	123,780
> 3 - 4 mi	250,250

Ref. No. 6

**23. Identify sensitive environments and wetlands acreage within 4 miles of the site.**

<u>Distance</u>	<u>Sensitive Environments*</u>	<u>Wetland Acreage</u>
On Site	None	0
> 0-1/4 mi	None	0
> 1/4 - 1/2 mi	None	4
> 1/2 - 1 mi	None	90
> 1 - 2 mi	None	320
> 2 - 3 mi	None	310
> 3 - 4 mi	State Listed Endangered Species Habitat (6) State Listed Threatened Species Habitat	305

\* The specific locations of species habitats known to exist within four miles of the site were not provided in available information, and therefore were assigned to the three to four mile distance category.

Ref. Nos. 21, 41

**24. If a release to air is observed or suspected, determine the number of people that reside or are suspected to reside within the area of air contamination from the release.**

A release to air is not observed or suspected; refer to question 21.

**25. If a release to air is observed or suspected, identify any sensitive environments, listed in question No. 23, that are or may be located within the area of air contamination from the release.**

A release to air is not observed or suspected; refer to question 21.



Document Control No.: 4200-16-ACOI  
May 28, 1993

**ATTACHMENT 1**  
**PHOTOGRAPH LOG**



Document Control No.: 4200-16-ACOI  
May 28, 1993

## **PHOTOGRAPH LOG**

### **INTERNATIONAL METALLURGICAL SERVICES NEWARK, NEW JERSEY**

On-Site Reconnaissance: June 2, 1993

**INTERNATIONAL METALLURGICAL SERVICES  
NEWARK, NEW JERSEY****On-Site Reconnaissance**

June 2, 1993

<u>Photo Number</u>	<u>Description</u>	<u>Time</u>
1P-1 to 1P-4	Panoramic view from the end of Blanchard Street, looking northeast to southwest.	11:35
1P-5 to 1P-7	Panoramic view of the northern end of the site, looking east to northeast from just inside the facility gate located at the northwest corner of the site.	11:42
1P-8	Looking north at the tank located just west of the shipping containers.	11:51
1P-9	Looking north at the shipping containers.	11:53
1P-10, 1P-11	Looking northeast from the northeast corner of the building.	12:06
1P-12, 1P-13	Looking southeast from the northeast corner of the building.	12:08
1P-14	Looking south from the northeast corner of the building.	12:12
1P-15 to 1P-17	Panoramic view of the southern section of the site, looking southeast to northeast from the sliding gate located in the southwest corner of the facility.	12:20



1P-1

11:35

First frame of panoramic view from the end of Blanchard Street, looking northeast to southwest.



1P-2

11:35

Second frame of panoramic view described for photograph 1P-1.



1P-3

11:35

Third frame of panoramic view described for photograph 1P-1.



1P-4

11:35

Fourth and last frame of panoramic view described for photograph 1P-1.



1P-5

11:42

First frame of panoramic view of the northern end of the site, looking east to northeast from just inside the facility gate located at the northwest corner of the site.



1P-6

11:42

Second frame of panoramic view described for photograph 1P-5.



1P-7

11:42

Third and last frame of panoramic view described for photograph 1P-5.



1P-8

11:53

Looking north at the tank located just west of the shipping containers.



1P-9

11:53

Looking north at the shipping containers.



1P-10

12:06

Looking northeast from the northeast corner of the building.



1P-11

12:06

Looking northeast from the northeast corner of the building.



1P-12

12:08

Looking southeast from the northeast corner of the building.



1P-13

12:08

Looking southeast from the northeast corner of the building.



1P-14

12:12

Looking south from the northeast corner of the building.



1P-15

12:20

First frame of panoramic view of the southern section of the site, looking southeast to northeast from the sliding gate located in the southwest corner of the facility.



1P-16

12:20

Second frame of panoramic view described for photograph 1P-15.



1P-17

12:20

Third and last frame of panoramic view described for photograph 1P-15.

**REFERENCES**

1. Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), List 8: Site/Event Listing, October 2, 1992, p. 125.
2. Certificate of Incorporation of International Metallurgical Services, Inc. (IMS), November 14, 1972.
3. Four-Mile Vicinity Map, compiled from the following U.S. Geological Survey 7.5 minute series Topographic Maps: "Elizabeth Quadrangle, NJ-NY," 1967, photorevised 1981; "Orange Quadrangle, NJ," 1955, photorevised 1981; "Weehawken Quadrangle, NJ-NY," 1967, photorevised 1981; and "Jersey City Quadrangle, NJ-NY," 1967, photorevised 1981.
4. Deed of Sale for IMS Site, May 22, 1979.
5. New Jersey Department of Environmental Protection and Energy (NJDEPE) Memorandum from David Beeman to File, Subject: International Metallurgical Services, Incident #86-08-19-03, File #07-14-313, January 23, 1987.
6. Letter from Bob Frost, Frost Associates, to Dennis Foerter, Roy F. Weston, Inc. (WESTON), April 6, 1993, with attachment (population data).
7. On-Scene Coordinator's Report, International Metallurgical Services Site, Newark, Essex County, New Jersey. Prepared by WESTON, Technical Assistance Team (TAT), for the United States Environmental Protection Agency (U.S. EPA), April 26, 1990.
8. Field Notebook No. 4200-16-ACKE, International Metallurgical Services, Inc., Work Order No. 04200-016-081-0002, On-Site Reconnaissance, WESTON, Edison, New Jersey, February 9, 1993.
9. NJDEPE Memorandum from David Beeman to File, Subject: International Metallurgical Services, Newark, Site Description, Case No. 86-08-19-03, File No. 07-14-313, May 9, 1987.
10. U.S. EPA Action Memorandum from John J. Shaw, On-Scene Coordinator, Response and Prevention Branch, to William J. Muszynski, P.E., Acting Regional Administrator (both of U.S. EPA), Subject: Preliminary Assessment and Request for Increase in CERCLA Removal Action Monies and Exemption from the Twelve Month Statutory Limit for the International Metallurgical Services Site, Newark, Essex County, New Jersey, September 12, 1988.
11. Phone Conversation Record: Conversation between Clerk, Newark Tax Assessor's Office, and Thomas Varner, WESTON, April 26, 1993.

**REFERENCES**

1. Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), List 8: Site/Event Listing, October 2, 1992, p. 125.
2. Certificate of Incorporation of International Metallurgical Services, Inc. (IMS), November 14, 1972.
3. Four-Mile Vicinity Map, compiled from the following U.S. Geological Survey 7.5 minute series Topographic Maps: "Elizabeth Quadrangle, NJ-NY," 1967, photorevised 1981; "Orange Quadrangle, NJ," 1955, photorevised 1981; "Weehawken Quadrangle, NJ-NY," 1967, photorevised 1981; and "Jersey City Quadrangle, NJ-NY," 1967, photorevised 1981.
4. Deed of Sale for IMS Site, May 22, 1979.
5. New Jersey Department of Environmental Protection and Energy (NJDEPE) Memorandum from David Beeman to File, Subject: International Metallurgical Services, Incident #86-08-19-03, File #07-14-313, January 23, 1987.
6. Letter from Bob Frost, Frost Associates, to Dennis Foerter, Roy F. Weston, Inc. (WESTON), April 6, 1993, with attachment (population data).
7. On-Scene Coordinator's Report, International Metallurgical Services Site, Newark, Essex County, New Jersey. Prepared by WESTON, Technical Assistance Team (TAT), for the United States Environmental Protection Agency (U.S. EPA), April 26, 1990.
8. Field Notebook No. 4200-16-ACKE, International Metallurgical Services, Inc., Work Order No. 04200-016-081-0002, On-Site Reconnaissance, WESTON, Edison, New Jersey, February 9, 1993.
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11. Phone Conversation Record: Conversation between Clerk, Newark Tax Assessor's Office, and Thomas Varner, WESTON, April 26, 1993.

**REFERENCES (continued)**

12. Calculation Sheet: Calculation of unpaved/unoccupied property area, by Thomas Varner, WESTON, April 26, 1993.
13. Letter from John L. Leporati, Program Manager, ERCS Zone 1, to Ms. Carla Dempsey, U.S. EPA Hazardous Site Evaluation Division, with attachment (March 1988 Dirt and Film Sample Analysis Results), June 23, 1988.
14. Memorandum from Michael Mentzel and Anibal Diaz, WESTON TAT, to John Shaw, U.S. EPA, Response and Prevention Branch, Subject: Soil Sampling Program Analytical Results, IMS, Newark, New Jersey, with attachments (analytical data for soil samples collected on October 28, 1987), December 14, 1987.
15. U.S. EPA Contract Laboratory Program, Rocky Mountain Analytical Laboratory, Case No. 8781, Laboratory Analysis from WESTON TAT Sampling Conducted December 21, 1987.
16. NJDEPE Memorandum from David Beeman to File, Subject: International Metallurgy, Case No. 86-08-19-03, File No. 07-14-313, September 12, 1986.
17. Letter from Vincent Ladd, Inspector, to Robert Buccine, Deputy Chief, Both of Newark Fire Department, April 17, 1987.
18. Phone Conversation Record: Conversation between Dan Van Abs, NJDEPE, and Dave Benfer, WESTON, November 16, 1992.
19. Project Note from Thomas Varner to File, Subject: Summary of groundwater use within 4 miles of the International Metallurgical Services site, May 6, 1993.
20. Phone Conversation Record: Conversation between Beth Tomito, Newark Engineer's Office, and Thomas Varner, WESTON, March 31, 1993.
21. Sensitive Environments Map, compiled from the following U.S. Fish and Wildlife National Wetlands Inventory Maps: "Elizabeth Quadrangle, NJ-NY," 1976; "Jersey City Quadrangle, NJ-NY," 1976; "The Narrows Quadrangle, NY-NJ," 1976; and "Arthur Kill Quadrangle, NY-NJ", 1976.
22. Surface Water Quality Standards, N.J.A.C. 7:9-4.1 et. seq., NJDEPE Division of Water Resources, August 1989.

**REFERENCES (continued)**

23. New York Codes, Rules and Regulation, Title 6, Chapter 10, Parts 700-705, 890, October 31, 1985.
24. Environmental Testing and Certification Corp. (ETC) - Findlay Laboratory, Laboratory analysis for acid solid sampling conducted by O.H. Materials Corp. (U.S. EPA ERCS) on October 25, 1988.
25. ETC Corp. - Findlay Laboratory, laboratory analyses for acid liquid sampling conducted by O.H. Materials Corp. (U.S. EPA ERCS) on October 25, 1988.
26. ETC Corp. - Findlay Laboratory, laboratory analyses for flammable organic solid sampling conducted by O.H. Materials Corp. (U.S. EPA ERCS) on October 25, 1988.
27. ETC Corp. - Findlay Laboratory, laboratory analyses for flammable organic liquid sampling conducted by O.H. Materials Corp. (U.S. EPA ERCS) on October 25, 1988.
28. ETC Corp. - Findlay Laboratory, laboratory analyses for base/neutral solid sampling conducted by O.H. Materials Corp. (U.S. EPA ERCS) on October 25, 1988.
29. ETC Corp. - Findlay Laboratory, laboratory analyses for oxidizer solid sampling conducted by O.H. Materials Corp. (U.S. EPA ERCS) on October 25, 1988.
30. ETC Corp. - Findlay Laboratory, laboratory analyses for peroxide solid sampling conducted by O.H. Materials Corp. (U.S. EPA ERCS) on October 25, 1988.
31. ETC Corp. - Findlay Laboratory, laboratory analyses for floor sweepings sampling conducted by O.H. Materials Corp. (U.S. EPA ERCS) on November 2, 1988.
32. ETC Corp. - Findlay Laboratory, laboratory analyses for drummed unknown solid sampling conducted by O.H. Materials Corp. (U.S. EPA ERCS) on May 3, 1989.
33. ETC Corp. - Findlay Laboratory, laboratory analyses for drummed unknown liquid sampling conducted by O.H. Materials Corp. (U.S. EPA ERCS) on May 3, 1989.
34. ETC Corp. - Findlay Laboratory, laboratory analyses for unknown waste crushing pit sampling conducted by O.H. Materials Corp. (U.S. EPA ERCS) on October 31, 1988.
35. Nichols, William D., Groundwater Resources of Essex County, New Jersey. Special Report No. 28, State of New Jersey Department of Conversation and Economic Development, Division of Water Policy and Supply, 1968.

**REFERENCES (continued)**

36. Olsen, Paul E. The Latest Triassic and Early Jurassic Formation of the Newark Basin (Eastern North America, Newark Supergroup): Stratigraphy, Structure, and Correlation; New Jersey Academy of Science Bulletin, Volume 25, No. 2, 1980.
37. Federal Register, Vol. 55, No. 241, December 14, 1990.
38. Water withdrawal point database printout, NJDEPE Bureau of Water Allocation, Water Supply Element, May 18, 1993.
39. Phone Conversation Record: Conversation between Bob Soldwedel, Chief, Bureau of Freshwater Fisheries, NJDEPE, and Thomas Varner, WESTON, May 24, 1993.
40. Bauersfeld, W.R. et al. Water Resources Data, New Jersey, Water Year 1991, Volume I, Surface Water Data. U.S. Geological Survey Water Data Report NJ-91-1.
41. Letter from Elena A. Williams, Senior Planner, NJDEPE Natural Heritage Program, to Richard M. Settino, WESTON. Subject: IMS Site and Associated Waterways, with attachments (endangered/threatened species data). May 25, 1993.

**REFERENCE NO. 1**

RUN DATE: 10/02/92 11:59:47  
CERCLIS DATA BASE DATE: 10/01/92  
CERCLIS DATA BASE TIME: 13:28:45  
VERSION 3.00

\*\* PROD VERSION \*\*  
U.S. EPA SUPERFUND PROGRAM  
\*\* CERCLIS \*\*  
LIST-8: SITE/EVENT LISTING

PAGE: 125  
CERHELP DATA BASE DATE: N/A  
CERHELP DATA BASE TIME: N/A

SELECTION:  
SEQUENCE: REGION, STATE, SITE NAME

EVENTS: ALL

EPA ID NO.	SITE NAME STREET CITY COUNTY CODE AND NAME	STATE ZIP CONG. DIST.	UPRBLE UNIT	EVENT TYPE	EVENT QUAL	ACTUAL START DATE	ACTUAL COMPL DATE	CURRENT EVENT LEAD
NJD980505267	INTERNATIONAL FLAVORS & FRAGRANCES INC 800 ROSE LANE UNION BEACH 025 MUMMOUTH	NJ 07735	00	DS1 PA1 S11			10/01/79 01/01/84 06/23/88 06/30/88	EPA (FUND) EPA (FUND) STATE (FUND)
NJD952273559	INTERNATIONAL METALLURGICAL SERVICES 190 BLANCHARD STREET NEWARK 013 ESSEX	NJ 07105	00	RV1 RV2 DS1 PA1 ARI AR2		02/22/88 09/21/88 12/28/88 12/28/88	07/11/88 08/21/89 09/17/87 09/23/87	EPA (FUND) EPA (FUND) EPA (FUND) EPA (FUND) EPA (FUND)
NJD037200292	INTERNATIONAL MICROWAVE DEV 51 CHODD WAY SOMERVILLE 035 SOMERSET	NJ 08876	00	DS1 PA1	NFA	06/26/92	01/29/92 09/14/92	EPA (FUND) EPA (FUND)
NJD002139228	INTERNATIONAL PAINT COMPANY 2270 MORRIS AVENUE UNION 039 UNION	NJ 07083	00	DS1 PA1 S11		02/01/86 06/30/89	02/01/86 02/20/86 09/29/89	STATE (FUND) STATE (FUND) STATE (FUND)
NJD009717182	INTERSTATE METALS 241-275 DUKE ST KEARNY 017 HUDSON	NJ 07032	00	DS1 PA1 PA2 S11	NFA NFA	01/02/89 03/01/89	06/01/80 06/01/80 01/09/89 03/08/89	EPA (FUND) EPA (FUND) STATE (FUND) STATE (FUND)
NJD980530521	INTL PAPER CABINET DIVISION 183 NATIONAL ROAD (P.O. 311) EDISON 023 MIDDLESEX	NJ 08817	00	DS1 PA1	NFA	07/01/84	06/01/81 09/01/84	EPA (FUND) EPA (FUND)
NJD070963202	INTL WIRE PRODUCTS COMPANY 500 W MAIN ST MYCKOFF 003 BERGEN	NJ 07481	00	DS1 PA1 S11		02/01/86 12/01/90	06/01/81 02/20/86 01/03/91	EPA (FUND) STATE (FUND) STATE (FUND)

File: 9 Entry: 1

CERCLIS Accession Number NJD982273559

(EPAID) EPA ID: NJD982273559

(REG) Region: 02

(ID) SITE IDENTIFICATION INFORMATION:

Primary Name:

(NAME) INTERNATIONAL METALLURGICAL SERVICES  
 (STREET) 196 BLANCHARD STREET  
 (CITY) NEWARK  
 (STATE) NJ  
 (ZIP) 07105  
 (COUNTY) ESSEX  
 (LAT) 40 deg. 43 min. 54.0 sec.  
 (LONG) 074 deg. 08 min. 42.0 sec.  
 (LLSRC) G

(CNTYCD) County Code: 013

(CONGDS) Congressional District: 10

(FED) Federal Facility Indicator: N

(FEDDOC) Federal Docket: N

(OWNER) Ownership Indicator: UN

(SMSA) Standard Metropolitan Statistical Area: 5640

(CLASS) Classification: ND

(LUPD) Last Update Date: 08-25-92

(FMSCD) FMS Code: 021C

(STAT) Status: N

(USGSHU) US Geological Survey Hydrologic Unit: 02030103

(OI) OPERATIONS INFORMATION:

(OPUN) Operable Unit: SITE EVALUATION/DISPOSITION

(OPDATA) Operable Unit Data:

EVENT	EVENT	CUR PLAN	CUR PLAN	ACTUAL	CUR PLAN	CUR PLAN	ACTUAL
TYPE	LEAD	START	START	START	COMPLETE	COMPLETE	COMPLETE
		DATE	QUARTER	DATE	DATE	QUARTER	DATE
PA1	F						09-23-87
DS1	F						09-17-87
RV1	F			02-22-88			07-11-88
RV2	F			09-21-88			08-21-89

**REFERENCE NO. 2**

**CERTIFICATE OF CHANGE OF REGISTERED OFFICE  
OR REGISTERED AGENT, OR BOTH**

(For Use By Domestic or Foreign Corporations)

Fees for filing in Office of the Secretary of State, State House, Trenton, N.J. 08625

Change of Registered Agent  
Filing Fee

\$5.00

Change of Registered Office  
Filing Fee

\$5.00

Change of Both Registered Agent and Registered Office  
Filing Fee

\$10.00

- NOTES:
1. No recording fee will be assessed.
  2. All checks drawn on Out-of-State Banks must be certified.

FOLDER NO:

517341X

TRANSACTION NO.:

FILED BY:

CERTIFICATE OF CHANGE  
OF REGISTERED OFFICE  
OR REGISTERED AGENT,  
OR BOTH

RECORDED AND FILED:

OCT 25 1988  
DONALD LAM  
SECRETARY OF STATE

FILED & RECORDED

Recorder's Initials

CERTIFICATE OF CHANGE OF REGISTERED OFFICE  
OR REGISTERED AGENT, OR BOTH

(For Use by Domestic or Foreign Corporations)

"Federal Employer Identification No."

12-1982459

To: The Secretary of State

State of New Jersey

Pursuant to the provisions of Section 14A:4-3, Corporations, General, of the New Jersey Statutes, the undersigned corporation, organized under the laws of the State of N.J., submits the following certificate for the purpose of changing its registered office or its registered agent, or both, in the State of New Jersey:

FIRST: The name of the corporation is **INTERNATIONAL METALLURGICAL SERVICES, INC.**

SECOND: The name of its new registered agent is

THIRD: The address\* of its new registered office is **196 BLANCHARD STREET  
NEWARK, N.J. 07105**  
(\*Include Zip Code)

FOURTH: The name of its former registered agent is

FIFTH: The address\* of its former registered office is **49 JOHNSON STREET  
NEWARK, N.J. 07105**  
(\*Include Zip Code)

SIXTH: The corporation further states that the address of its new registered office and the address of its new registered agent are identical.

SEVENTH: The changes designated above were authorized by resolution duly adopted by its board of directors.

Dated this **10**

day of

**OCT.**

**19 79**

**INTERNATIONAL METALLURGICAL SERVICES, INC.**  
(Corporate Name)

By **X**

**VICTOR PANNONE, PRES.**

(Type or print name and title)

# CERTIFICATE OF INCORPORATION

of

## INTERNATIONAL METALLURGICAL SERVICES, INC.

**THIS IS TO CERTIFY THAT,** there is hereby organized a corporation under and by virtue of N. J. S. 14A:1-1 et seq., the "New Jersey Business Corporation Act."

1. The name of the Corporation is: International Metallurgical Services, Inc.

2. The address of the Corporation's initial registered office is: 46 Baltusrol Road, Summit, New Jersey

and the name of the registered agent at such address is: Victor Pannone

3. The purposes for which this Corporation is organized are:

To engage in any activity within the purposes for which Corporations may be organized under the "New Jersey Business Corporation Act." N. J. S. 14A 1-1 et seq.

4. The aggregate number of shares which the Corporation shall have authority to issue is: 1,000 shares no par value

5. The first Board of Directors of this Corporation shall consist of two Directors and the name and address of each person who is to serve as such Director is:

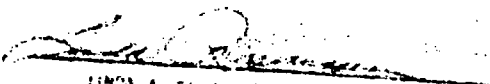
Name	Address	Zip Code
Victor Pannone	46 Baltusrol Road, Summit, N. J.	07901
Barbara Pannone	46 Baltusrol Road, Summit, N. J.	07901

6. The name and address of each incorporator is:

Name	Address	Zip Code
Victor Pannone	46 Baltusrol Road, Summit, N. J.	07901
Barbara Pannone	46 Baltusrol Road, Summit, N. J.	07901

In Witness Whereof, each individual incorporator, being over twenty-one years of age has signed this Certificate; or if the Incorporator be a corporation has caused this Certificate to be signed by its duly authorized officers this 14th day of November, 1972

Signed, sealed and delivered in the presence of:



LINDA A. BERMAN  
NOTARY PUBLIC OF NEW JERSEY  
My Commission Expires on 12-31-1975

  
Victor Pannone, I.S.

  
Barbara Pannone, I.S.

FILED AND RECORDED

NOV 22 1972

Robert M. Telsey

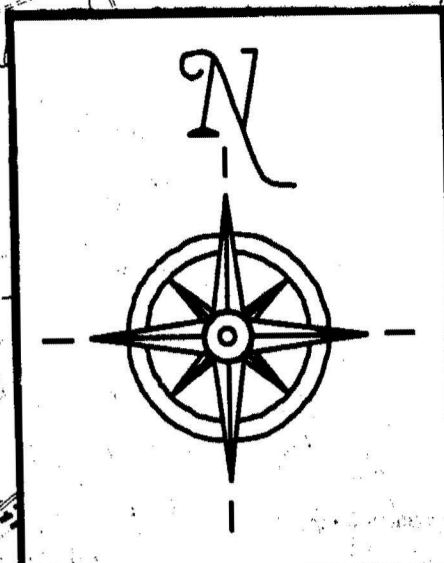
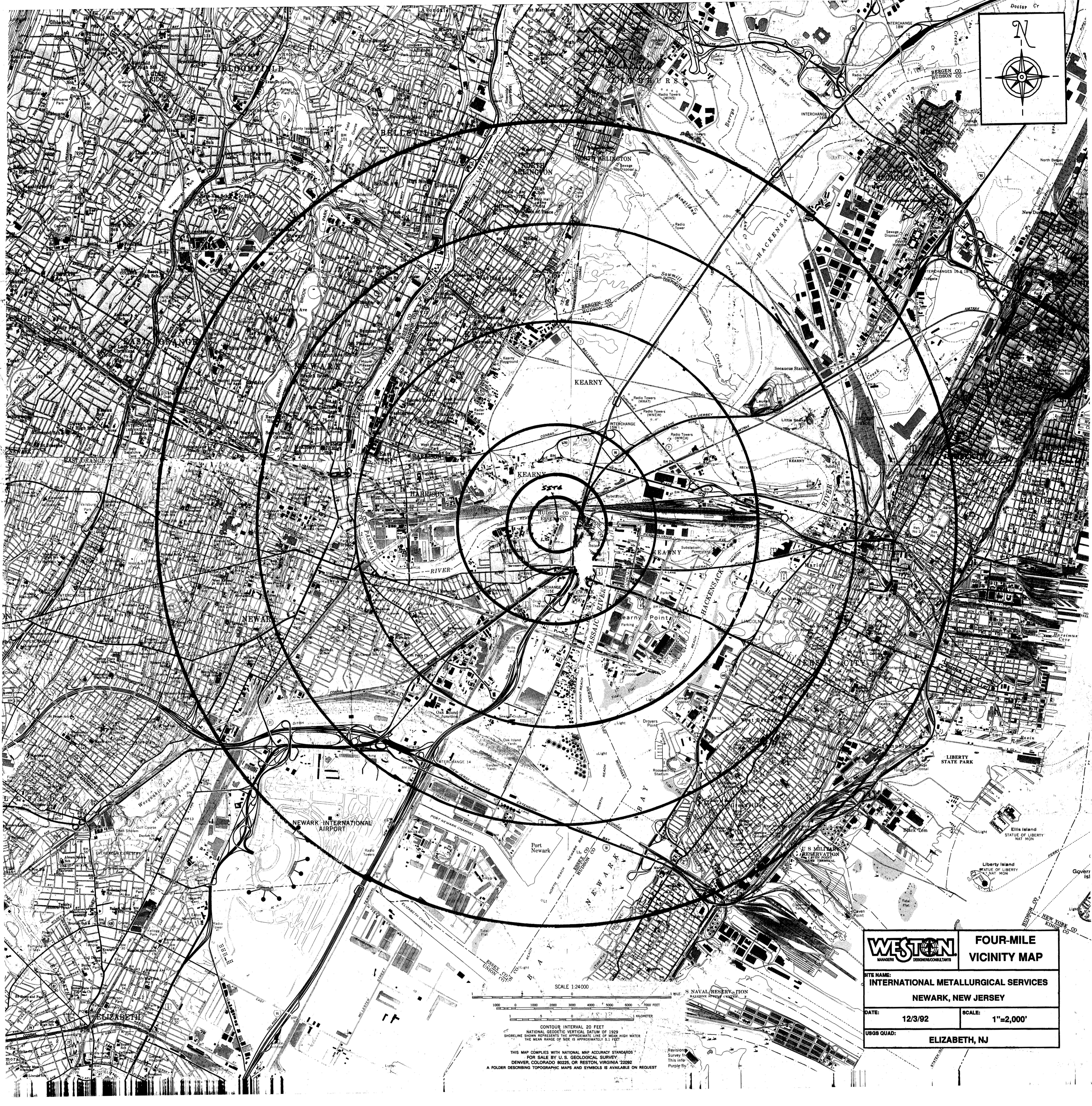
ALBANY MEMORANDUM OF DECISION

FILED VALUE	\$25.00
FILED FEE	35.00
RECORDING	_____
CERTIFYING COPY	_____
SIC. OF STATE	_____
	\$60.00 fg

David Pliskin  
940 Ambury Ave  
Edison, N. J. 08817

136171

**REFERENCE NO. 3**



SCALE 1:24000  
1 0 1000 2000 3000 4000 5000 6000 7000 FEET  
1 0 1 2 3 4 5 6 7 8 9 10 KILOMETERS

CONTOUR INTERVAL 20 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929  
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER  
THE MEAN RANGE OF TIDE IS APPROXIMATELY 5.3 FEET  
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U.S. GEOLOGICAL SURVEY  
DENVER, COLORADO 80226 OR RESTON, VIRGINIA 22092  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

<b>WESTON</b> MANAGERS DESIGNERS/CONSULTANTS		<b>FOUR-MILE VICINITY MAP</b>	
SITE NAME: <b>INTERNATIONAL METALLURGICAL SERVICES</b>			
<b>NEWARK, NEW JERSEY</b>			
DATE:	<b>12/3/92</b>	SCALE:	<b>1"=2,000'</b>
USGS QUAD: <b>ELIZABETH, NJ</b>			

**REFERENCE NO. 4**

## DISTRICT OF NEW JERSEY

8202419 P-0041  
S BANKRUPTCY COURT  
S POST OFFICE  
O BOX 557  
NEWARK, NJ 07101

CASE NUMBER  
INTERNATIONAL METALLURGICAL SERVICES, INC  
196 BLANCHARD STREET 82-02419  
NEWARK, NJ 07105  
SSN - 22-1982458

## ADDRESSEE

4 CITY  
CITY OF NEWARK

## NOTICE OF MOTION

PLEASE TAKE NOTICE THAT YOUR UNDERSIGNED ON BEHALF OF INTERNATIONAL METALLURGICAL SERVICES, INC. SHALL MOVE BEFORE THE UNITED STATES BANKRUPTCY COURT, DISTRICT OF NEW JERSEY, AT THE U.S. POST OFFICE & COURT HOUSE BLDG., FEDERAL SQUARE, NEWARK, NEW JERSEY ON MAY 7, 1984 AT 10:00 A.M. IN COURTROOM #7 OR AS SOON THEREAFTER AS COUNSEL MAY BE HEARD FOR THE FOLLOWING RELIEF:

(A) AN ORDER HOLDING AND DETERMINING THAT ALL PRECIOUS METALS, INCLUDING BUT NOT LIMITED TO SILVER IN ANY FORM, SUPPLIED BY FUNDAMENTAL RESOURCES TO INTERNATIONAL METALLURGICAL SERVICES, INC. PURSUANT TO A REFINING AGREEMENT WITH INTERNATIONAL METALLURGICAL SERVICES, INC., DATED FEBRUARY 24, 1984, AND THE PRODUCTS THEREOF, SHALL BE DEEMED OWNED BY FUNDAMENTAL RESOURCES, FREE OF ALL CLAIMS OF CREDITORS.

(B) AN ORDER HOLDING AND DETERMINING THAT INTERNATIONAL METALLURGICAL SERVICES, INC., SHALL, IN ACCORDANCE WITH THE SAID REFINING AGREEMENT, DELEGATE THE AFORESAID MATERIAL AND PRODUCT THEREOF AND SHALL BE DEEMED A BAILEE FOR FUNDAMENTAL RESOURCES FOR THE SAID MATERIAL AND PRODUCT THEREOF;

(C) AN ORDER HOLDING AND DETERMINING THAT INTERNATIONAL METALLURGICAL SERVICES, INC. MAY FILE A FINANCING STATEMENT PURSUANT TO N.J.S.A. 12A:9-408 IN CONNECTION WITH SAID PRECIOUS METALS AND THE PRODUCTS THEREOF;

(D) AN ORDER APPROVING THE AGREEMENT BETWEEN INTERNATIONAL METALLURGICAL SERVICES, INC. AND FUNDAMENTAL RESOURCES;

(E) AN ORDER FOR SUCH OTHER AND FURTHER RELIEF AS THE COURT MAY DEEM JUST AND EQUITABLE.

YOUR UNDERSIGNED SHALL RELY UPON THE AFFIDAVIT SUBMITTED.  
THE AGREEMENT BETWEEN FUNDAMENTAL RESOURCES AND INTERNATIONAL METALLURGICAL SERVICES, INC. WILL BE ON FILE WITH THE UNITED STATES BANKRUPTCY COURT AT THE UNITED STATES COURT HOUSE AND POST OFFICE BUILDING, NEWARK, NEW JERSEY.

MANDELBAUM, SALSBERG, GOLD &  
LAZRIS.  
BY: YALE I. LAZRIS  
ATTORNEYS FOR DEBTOR, INTERNATIONAL  
METALLURGICAL SERVICES INC.

736-4600

DATED APRIL 3, 1984 AT NEWARK, NJ

FOR THE COURT  
CLIFFORD P. KIRSCH

This Breed, made the 22nd day of May

~~Western~~ INTERNATIONAL MINERALS & CHEMICAL CORPORATION

a corporation existing under and by virtue of the laws of the State of New York  
having its principal office at 666 Garland Place  
of Des Plaines in the County of Cook  
and State of Illinois 60016 herein designated as the Grantor.

500

**INTERNATIONAL METALLURGICAL SERVICES, INC.**

4132330

residing or located at 47 Johnson Street Newark in the County of Essex City and State of New Jersey 07105 herein designated as the Grantors:

Witnesseth, that the Grantor, for and in consideration of **NINETY THOUSAND DOLLARS**

**-( \$90,000.00 )**

lawful money of the United States of America, to it in hand well and truly paid by the Granters, at or before the making and delivery of these presents, the receipt whereof is hereby acknowledged, and the Grantor being therewith fully satisfied, does by these presents grant, bargain, sell and convey unto the Grantee forever,

County of Essex City of Newark and State of New Jersey, more particularly described as follows:

The property hereby conveyed is described in Exhibit A attached hereto.

RECEIVED & RECORDED  
REGISTERED OFFICE  
ESSEX COUNTY COUNCIL  
MAY 31 10 49 AM '75

BOOK 4643 PAGE 853

12-5001-50

784190-202 BLANCHARD ST.

ALL those certain tracts or parcels of land in the City of Newark, County of Essex and State of New Jersey:

**TRACT ONE:** BEGINNING at a point in the most easterly line of Blanchard Street, distant therein northerly measured along the same 1103.77 feet from an angle in said Street, which angle is located southerly from the southerly bank of the Passaic River, which point of beginning is also in the most northerly line of lands to be acquired by Cochrane Chemical Company and from thence running (1) along said line to be acquired by Cochrane Chemical Company south 53 degrees 53 minutes east 183.81 feet to a point distant 16 feet westerly from the westerly line of lands of the Eagle Picher Lead Company and measured at right angles thereto; thence (2) north 31 degrees 03 minutes east and parallel with the said line of lands of the Eagle Picher Lead Company 264.34 feet to the natural high water line of the Passaic River; thence (3) along said high water line of the Passaic River on a course of north 81 degrees 30 minutes west 215 feet to the said easterly line of Blanchard Street; thence (4) along said line of Blanchard Street south 27 degrees 50 minutes west 171.61 feet to the point and place of BEGINNING.

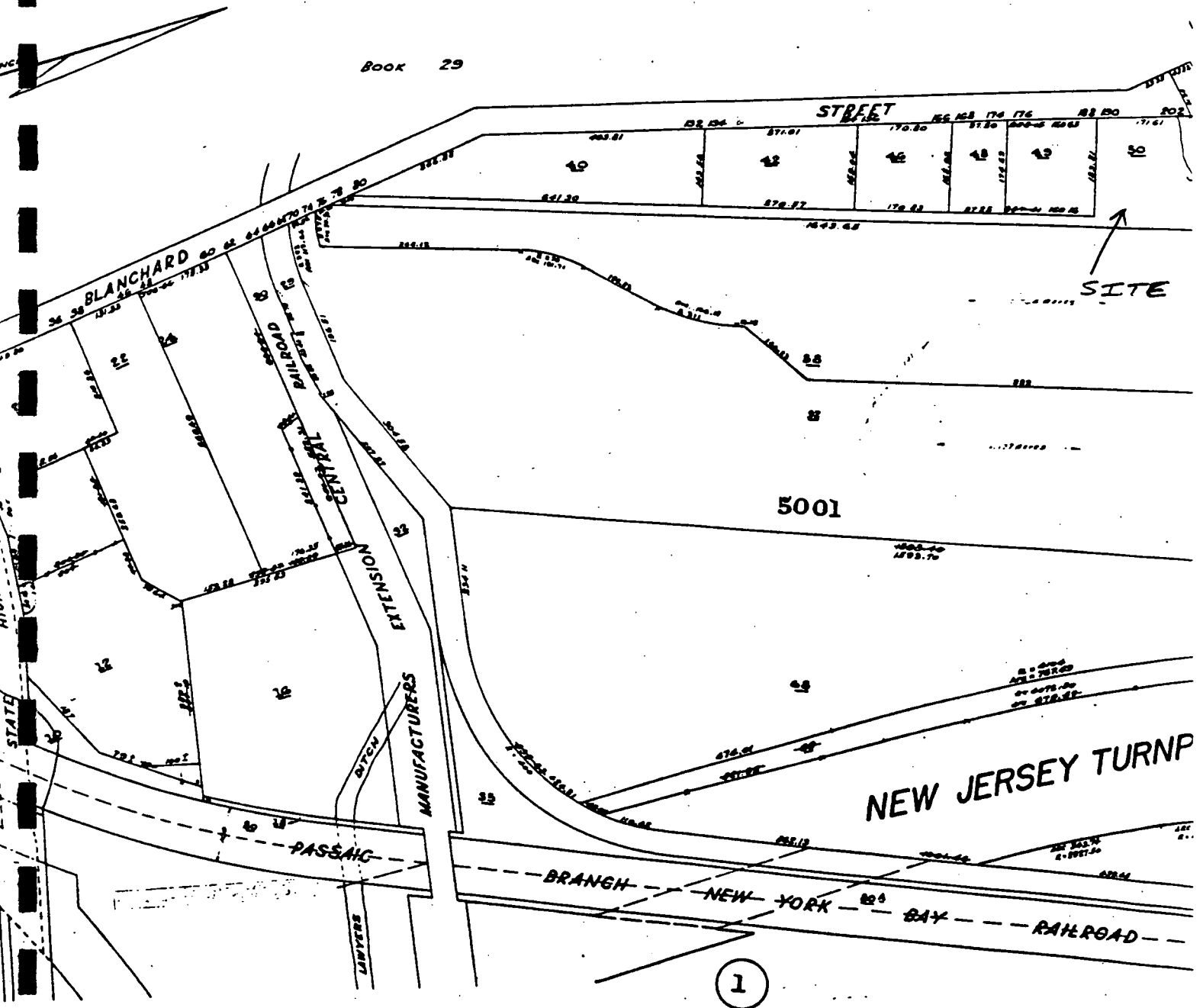
**TRACT TWO:** BEGINNING at a point of intersection of the westerly line of lands of Eagle Picher Lead Company with the most easterly line of Blanchard Street; thence running (1) along said easterly line of Blanchard Street north 4 degrees 17 minutes east 38.48 feet to a point distant westerly 16 feet measured at right angles to the said westerly line of lands of Eagle Picher Lead Company; thence (2) north 31 degrees 03 minutes east and parallel with the westerly line of said lands of the Eagle Picher Lead Company and running partly along the most easterly line of lands to be conveyed to Cochrane Chemical Company and the tract first hereinabove described a distance of 1804.45 feet to the natural high water mark of the Passaic River; thence (3) along the said high water line of the Passaic River south 84 degrees 50 minutes east 17.75 feet to the said westerly line of lands of the Eagle Picher Lead Company; thence (4) along the westerly line of lands of the said Eagle Picher Lead Company south 31 degrees 51 minutes west 1643.72 feet to the said easterly line of Blanchard Street and the point and place of BEGINNING.

The foregoing description is in accordance with a survey made by John J. Arnsperger, Surveyor, dated October 7, 1942. The above premises are known as Lot 50 in Block 5001 on the Tax Map of the City of Newark.

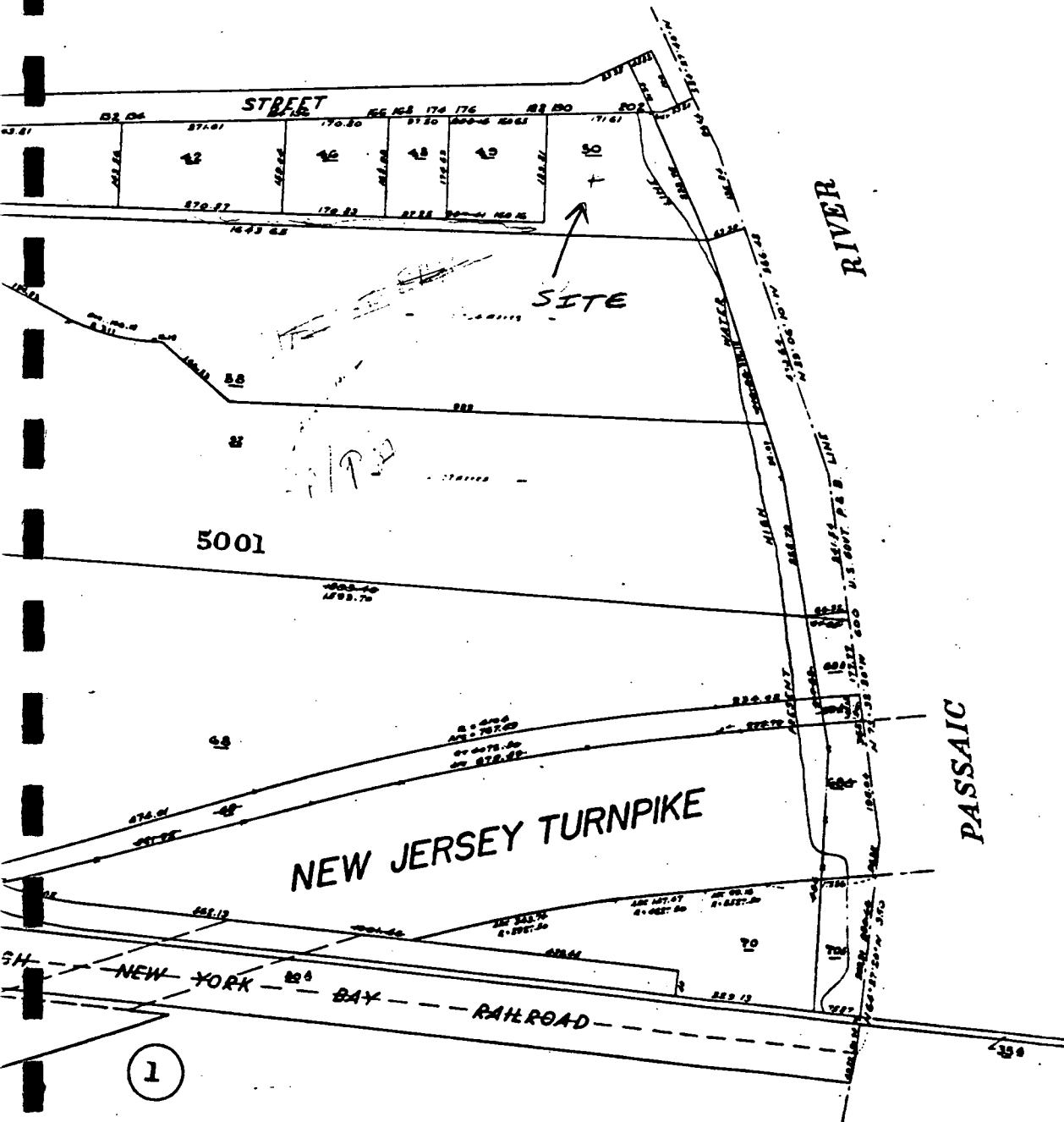
Being the same premises conveyed to Commercial Solvents Corporation, a corporation of Maryland, by Cyrus W. Hall, Trustee in Bankruptcy of the Estate of Miner-Eggar Chemical Corporation, Bankrupt, by deed dated January 14, 1943, and recorded March 31, 1943, in the Essex County Register's Office in Deed Book R 101, at page 62.

Commercial Solvents Corporation subsequently changed its name to IMC Chemical Group, Inc. Thereafter, IMC Chemical Group, Inc. merged into International Minerals & Chemical Corporation.

Together with whatever right, title and interest Grantor may have in an easement conveyed by Harry Lipman and Frieda Lipman, his wife, to Commercial Solvents Corporation, dated January 10, 1947, recorded March 21, 1947, in Book R 109, Page 265 et seq.



**PASSAIC**



**REFERENCE NO. 5**

M E M O R A N D U M

To: File through Robert Zollner

From: David Beeman *LB* Date: 1-23-87

Subject: ~~International Metallurgical Services~~, Incident #86-08-19-03,  
File #07-14-313

See memo to file dated 9-12-86. No Directive Letter has been issued, as the site is not in need of emergency clean up. At this time, the building is secured from the general public. The site was last inspected on 1-19-87 by Newark Fire Dept. Inspector Vincent Ladd (733-7495).

At this time, the investigation is limited to assuring that the waste is disposed of properly by the current facility operator, Santo Lalomia, the bankruptcy trustee.

I went to the U. S. Bankruptcy Court on 1-23-87 to review the subject file. The following are the important items learned:

U. S. Bankruptcy case #82-02419.

The original filing was for Chapter 11 on 4-15-82.

The case was converted to Chapter 7 on 1-16-86 due to the failure of I.M.S. to submit financial Disclosure Statements and a Plan of Reorganization.

An examination under oath of Victor Pannone (I.M.S. President) was conducted on 3-5-86 under Rule 2004 of the U. S. Bankruptcy Code. In the transcript, Mr. Pannone states that I.M.S. ceased operation in November, 1984. The transcript also reveals that I.M.S. was in the precious metal refining and recovery business. Among other operations, they up graded the quality of silver bouillon, recovered silver from photographic film, and recovered gold from electronic circuitry.

The last item reveals that the site is covered under ECRA regulations since operations ceased after Dec. 31, 1983. I phoned Jane Ten Eyck (BISE) on 1-23-87 and informed her of this. She confirmed that the operations performed at I.M.S. have the proper S.I.C. code and that the site is subject to ECRA. She said she would get back to me shortly to inform as to what action BISE would take. At a minimum, BISE would inform Mr. Lalomia that any sale of the property would entail an ECRA filing or the transfer of title would not be valid.

Recommendations:

Refer hazardous waste facility violations.

Continue to check on the site to assure that conditions remain stable.

Inspect the inside of the building periodically through arrangements with Mr. Lalomia as the site is tacitly operating as a hazardous waste storage facility.

**REFERENCE NO. 6**

# FROST ASSOCIATES

P.O. Box 495, Essex, Connecticut 06426  
(203) 767-1254 Fax (203) 767-7069

Apr 6, 1993

To: Dennis Foerter  
Roy F. Weston Inc  
4th Floor Raritan Plaza  
Edison, New Jersey 08837-3616

Fr: Bob Frost  
Frost Associates  
P.O. Box 495  
Essex, Conn 06426

1: (203) 767-1254  
Fax: (203) 767-7069

Sub: International Metallurgical Services  
Newark NJ

Job: 04200-016-081-002-01

CIRCLIS: NJD982273559

Site Longitude: 74-07-40 - 74.127777  
Site Latitude : 40-44-18 - 40.738331

The CENTRACTS report below identifies the population, households, and private water wells of each Block Group that lies within, or partially within, the 4, 3, 2, 1, .5, and .25, mile "rings" of the latitude and longitude coordinates above. CENTRACTS may have up to ten radii of any length. 1000 block groups, and 15000 block group sides.

CENTRACTS uses the 1990 Block Group population and Block Group house count data found in the Census Bureau's 1990 STF-1A files. The sources of water supply data are from the Bureau's 1990 STF-3A files. The boundary line coordinates of the Block Groups were extracted from the Census Bureau's 1990 TIGER/Line Files.

CENTRACTS reports are created with programs written by Frost Associates, P.O. Box 495, Essex, Conn. The code was written using Microsoft's Quick-Basic Ver. 4.5.

Latitude and Longitude coordinates identifying a site are entered in degrees and decimal degrees. One or more county files holding Block Group boundary lines are selected for use by CENTRACTS by determining whether the site coordinates fall within the minimum and maximum Lat/Lon coordinates of each county in the state.

Each Block Group line segment has Lat/Lon coordinates representing the "From" and "To" ends of that line. All coordinates from the selected county files are read and converted from degrees, decimal degrees to X/Y miles from the site location. Each line segment is then examined whether it lies within or partially within the maximum ring from the site.

The unique Block Group ID numbers of each line segment that lie within the maximum ring are retained. All Block Group boundary lines matching the Block Group numbers are then extracted from the respective county files to obtain all sides of the included Block Groups. Boundary records are then sorted in adjacent side order to determine the shape and area of each Block Group polygon.

International Metallurgical Services  
Newark, NJ  
JD982273559

A method to solve for the area of a polygon is to take one-half the sum of the products obtained by multiplying each X-coordinate by the difference between the adjacent Y-coordinates. For a polygon with coordinates at adjacent angles A, B, C, D, and E. The formula can be expressed:

$$\text{Area} = 1/2\{X_a(Y_e - Y_b) + X_b(Y_a - Y_c) + X_c(Y_b - Y_d) + X_d(Y_c - Y_e) + X_e(Y_d - Y_a)\}$$

For each ring, the selected Block Groups will be inside, outside, or intersected by the ring. When a polygon is intersected, the partial Block Group area within that ring is calculated using the method described below.

When a ring intersects a Block Group, the intersect points are solved and plotted at the points where the ring enters and exits the shape. The chord line, a line within the circle connecting the intersect points is determined. This chord line is used to calculate the segment area, the half moon shape between the chord line and the ring, and the sub-polygon created by the chord line and the Block Group boundaries that lie outside the ring.

The segment area is subtracted from the sub-polygon area to determine the area of the sub-polygon outside the ring. The area outside the ring is then subtracted from the area of the entire polygon to arrive at the inside area. This inside area is then divided by the tract's total area to determine the percentage of area within the ring. This process is repeated for each block group that is intersected by one of the rings. The total area, partial area, and percentage of partial area of those block groups within, or partially within a ring, are held in memory for the report.

On occasion, the algorithm described above is unable to determine the area of the partial area. Within the report program is a "Paint" routine which allows an enclosed shape to be highlighted. Another routine calculates the percentage of highlighted screen pixels to the pixels within the polygon. A manual entry is allowed. Both the "Paint" method and manual entry method override the calculated method.

CENTRACTS lists, starting on page 4, all Block Groups in State, County, Census Tract, and Block Group ID order that lie within, or partially within, the maximum ring. Each Block Group is identified by a City or Town name and by the Block Group's State, County, Tract and Block Group ID number. Following is the Block Group's 1990 population and house count extracted from the Census Bureau's 1990 STF-1A files.

The next four columns display water source data from the 1990 STF-3A files. The first column is "Units with Public system or private company source of water", followed by "Units with individual well, Drilled, source of water"; "Units with individual well, Dug, source of water" and "Units with Other source of water".

For each ring, CENTRACTS then shows the Block Groups that are within that ring, the Block Group's total area in square miles, the partial area of the Block Group within that ring, and the partial percentage within the ring. The areas of the included Block Group and the partial areas are then totaled.

The last section tallies the demographic data within each ring. The percentage of area for each Block Group is multiplied times the census data for that Block Group and totaled for all Block Group's within the ring. Ring totals are then determined by subtracting the three mile data from the four mile, the two mile from the three mile, one from the two, etc... Population on private wells is calculated using the formula:  $((\text{Drilled} + \text{Dug Wells}) / \text{Households}) * \text{Population}$

International Metallurgical Services  
Newark, NJ  
NJD982273559

=====  
Site Data  
=====

Population: 430489.63  
Households: 165107.06  
Drilled Wells: 105.50  
Dug Wells: 26.05  
Other Water Sources: 155.79

=====  
Partial (RING) data  
=====

---- Within Ring: 4 Mile(s) and 3 Mile(s) ----

Population: 250248.89  
Households: 97022.39  
Drilled Wells: 94.84  
Dug Wells: 18.05  
Other Water Sources: 120.74

\*\* Population On Private Wells: 291.16

---- Within Ring: 3 Mile(s) and 2 Mile(s) ----

Population: 123780.73  
Households: 47157.05  
Drilled Wells: 10.66  
Dug Wells: 8.00  
Other Water Sources: 22.12

\*\* Population On Private Wells: 48.98

---- Within Ring: 2 Mile(s) and 1 Mile(s) ----

Population: 51433.07  
Households: 19224.83  
Drilled Wells: 0.00  
Dug Wells: 0.00  
Other Water Sources: 12.90

\*\* Population On Private Wells: 0.00

---- Within Ring: 1 Mile(s) and .5 Mile(s) ----

Population: 4676.06  
Households: 1565.43  
Drilled Wells: 0.00  
Dug Wells: 0.00  
Other Water Sources: 0.04

\*\* Population On Private Wells: 0.00

International Metallurgical Services  
Newark, NJ  
NJD982273559

----- Within Ring: .5 Mile(s) and .25 Mile(s) -----

Population:	115.14
Households:	49.40
Drilled Wells:	0.00
Dug Wells:	0.00
Other Water Sources:	0.00

\*\* Population On Private Wells: 0.00

----- Within Ring: .25 Mile(s) and 0 Mile(s) -----

Population:	235.73
Households:	87.96
Drilled Wells:	0.00
Dug Wells:	0.00
Other Water Sources:	0.00

\*\* Population On Private Wells: 0.00

\*\* Total Population On Private Wells: 340.14

**REFERENCE NO. 7**

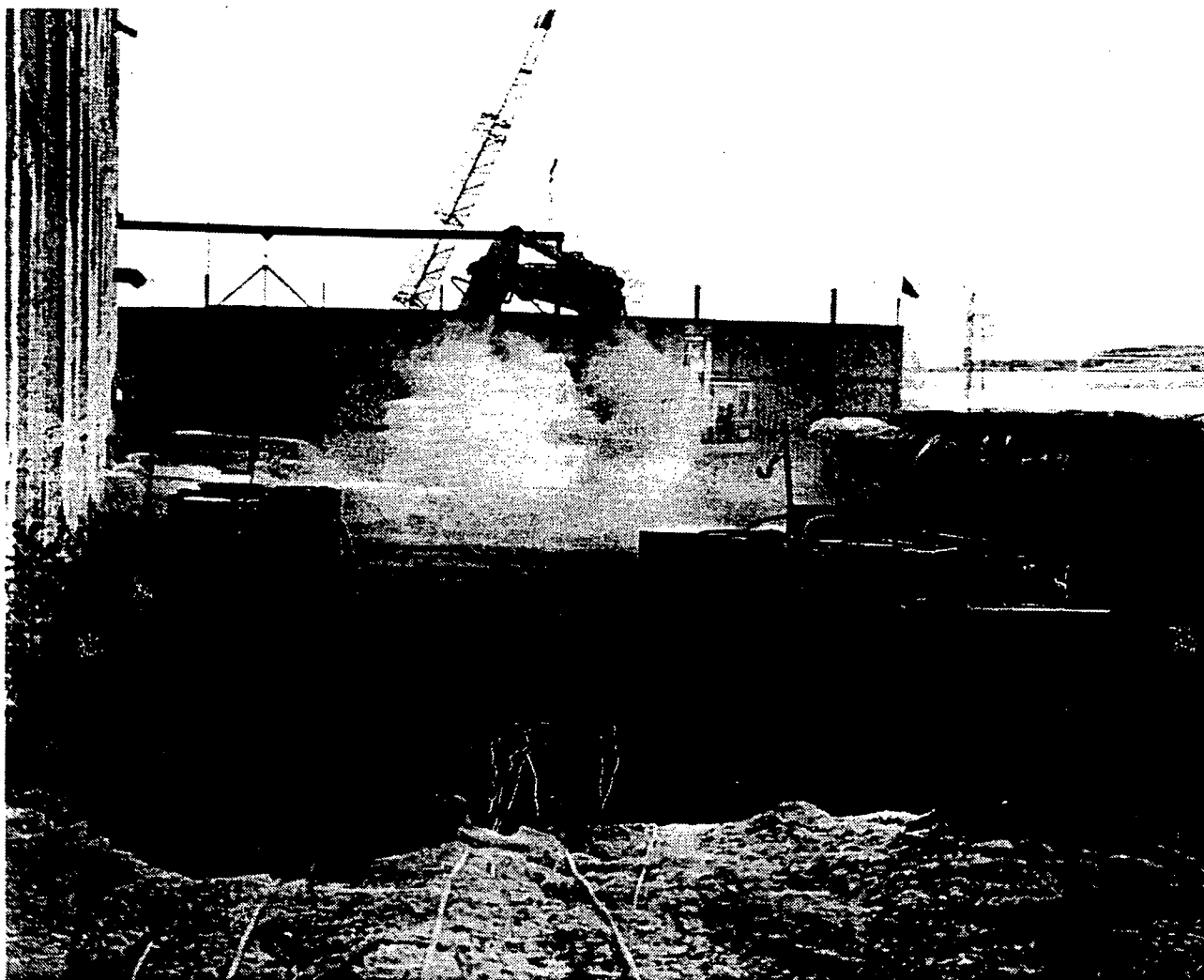


U.S. Environmental Protection Agency Region II  
Emergency and Remedial Response Division  
Removal Action Branch

**On-Scene Coordinator's Report  
International Metallurgical Services Site  
Newark, Essex County, New Jersey**

---

OSC: John Shaw



Prepared by:

Roy F. Weston, Inc.

Major Programs Division

In Association with ICF-Kaiser Engineers Inc., C.C. Johnson & Malhotra, P.C.,  
Resource Applications, Inc. and R.E. Sarriera Associates

TAT-02-F-05793

ON SCENE COORDINATOR'S REPORT  
INTERNATIONAL METALLURGICAL SERVICES  
NEWARK, NEW JERSEY

SITE IDENTIFICATION NUMBER: 1-C

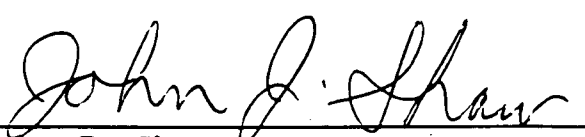
Prepared For:

Removal Action Branch  
Emergency and Remedial Response Division  
U.S. Environmental Protection Agency, Region II  
Edison, New Jersey 08837

Prepared By:

Technical Assistance Team  
Roy F. Weston, Inc.  
Edison, New Jersey 08837

Concurred By:

  
John J. Shaw  
Removal Action Branch

Reviewed By:

  
John Witkowski  
Removal Action Branch

Date of Release:

April 26, 1990

ON SCENE COORDINATOR'S REPORT  
INTERNATIONAL METALLURGICAL SERVICES  
NEWARK, NEW JERSEY

1.0 INTRODUCTION

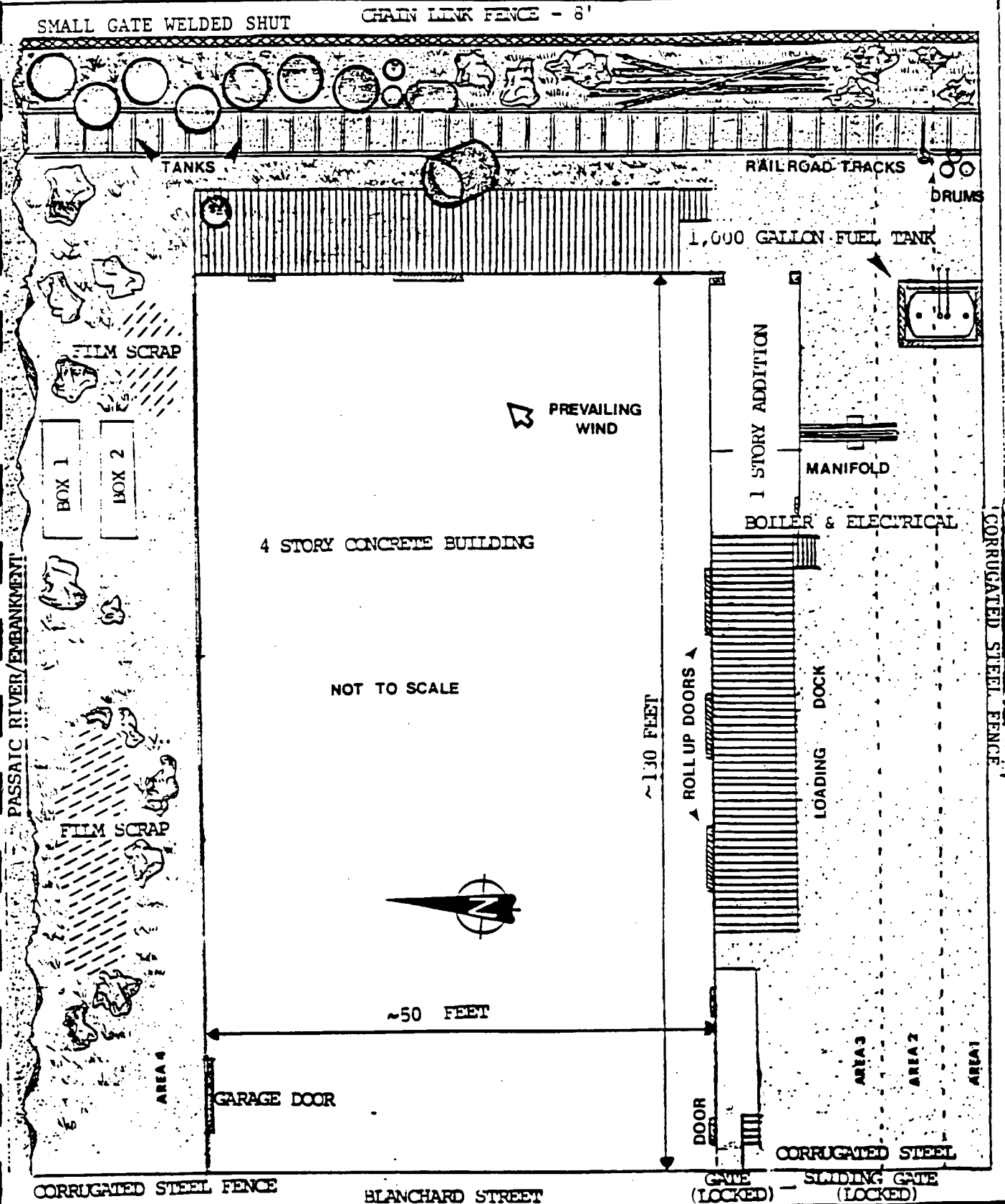
1.1 Site Setting and Description

The International Metallurgical Services Company (IMS), is an abandoned precious metals refining facility located at 196 Blanchard Street, Newark, New Jersey. The property occupies approximately 45,000 square feet of land in an old industrial section in Newark's Ironbound district. The site is bordered to the north by the Passaic River, to the east by the Norpack Corporation, to the south by Pigments and Colors Corporation, and to the west by Blanchard Street. A map showing the location of the Essex County site is attached (refer to Figure 1).

The property is situated next to a densely populated residential and commercial neighborhood, where more than 35,000 people live and work within a one mile radius of the site. The New Jersey Turnpike (Route 95) is located less than 500 yards to the east, while a busy tavern is located across the street 40 feet to the west. The perimeter of the property is clearly defined by a secure corrugated steel fence that stretches along the south and west end of the

site, and by a chain linked fence that runs along the east end of the property. The north end of the property is open to the Passaic River. A sliding vehicle gate located on the west end of the corrugated steel fence provides easy access onto the site from Blanchard Street.

Within the fence line is a four story apparently structurally sound brick building surrounded by a grassy lot to the north, south and east. Approximately 30 cubic yards of spent photographic film was found on the north end of the lot. The piles were situated about twenty yards from the Passaic River. Laboratory analysis of the film has shown that it contains cyanide and silver in varying concentrations. Scattered around and near the piles were scrap metal, tanks, pipes and miscellaneous debris. Tanks and railroad ties can be found on the east end of the lot, while a 1000 gallon tank and tank wagon loading and unloading station can be found on the south end of the lot. Markings on the manifold indicate that it may have been used to pump methanol, isopropanol, cellosolve, butylacetate, ethylacetate, and nitropropane. These substances may have been stored in the tanks located on the third floor of the building. A detailed map of the site property is attached, (refer to Figure 2).


**WESTON**

 SPILL PREVENTION &  
EMERGENCY RESPONSE DIVISION

EPA PM

JOHN SHAW

SITE LAYOUT

 In Association with ICF Technology Inc., C.C. Johnson & Associates,  
Inc., Resource Applications, Inc., Geo/Resource Consultants, Inc.,  
and Environmental Toxicology International, Inc.

TAT PM

DAVE TRIGGS

FIGURE 2

The four story building is an all concrete and brick structure, constructed on piles, one to two feet above grade and is approximately 50 to 130 feet in length. A one story addition accessible only from the outside, is attached to the southeast corner of the building. A section of the addition was used to house the boiler and electrical panels to the building. The other section, which is open to the outside, contains two large crucible type vessels. Steel rollup doors can be found on three sides of the building. Three along the south wall, and one on the east and north walls. There are rollup doors on each of the four floors on the east side of the building. A hoist located just outside the fourth floor roll up door is capable of raising and lowering materials within the building to a wooden loading platform that spans the east and south walls of the building.

The first floor of the building consists of offices, a laboratory, a reception area, a locker room and a warehouse. Approximately 60 percent of the floor space is occupied by the warehouse. The laboratory, measuring 12 feet by 20 feet, housed over 50 containers of chemical reagents ranging in size from several ounces to a gallon. More chemicals along with furniture, and paper debris were found scattered haphazardly throughout the office area. Cardboard, machinery parts, three empty 400 gallon mixing vessels, fire

bricks, a possible heat treatment vessel and containers varying in size were found in the warehouse area.

The second floor is divided into four walled off areas where approximately 50 containers and drums ranging in size from one gallon to fifty-five gallons were found along with two large mixing vessels. Three area on the floor are segregated by a steel mesh wall. One area, littered with metal scrap and a drum of aluminum powder may have been used as a maintenance shop. Drums and containers were found in the other two caged areas on the floor. A room used to store tools and equipment was found to contain four bottles of methyl ethyl ketone (MEK) peroxide, a shock sensitive material. Labels found on other containers indicate that they might have contained nitric acid, sulfuric acid, sodium hydroxide, sodium cyanide, formic acid, paints and paint thinners. Containers without any labels or markings were considered unknowns until sampled and analyzed.

The third floor is divided into two walled off areas and one partially walled off area. Rows of empty tanks ranging in size from 5,000 gallons to 8,000 gallons occupy all three areas. Containers ranging in size from 5 gallons to 55 gallons were found in a corridor that separates the two main

rooms. Labels and/or markings indicated that the containers may have held nickel powder, zinc powder, peroxides and many unknowns.

The fourth floor is divided into three walled off areas. Two of the areas make up store rooms, one located on the northwest corner of the building and one on the southwest corner. The third area is located roughly at the center of the floor, houses a single empty tank. A small caged off area connects to the tank room, as well as a large vault used to store bars of gold and silver during the facilities operation. Another caged off area located next to the northwest store room was found littered with many containers and laboratory reagents ranging in volume from one ounce to thirty gallons. The containers were found piled haphazardly amongst paper and other miscellaneous debris. Labels and/or markings on some of these containers indicated that they may have contained phenols, vanadium pentoxide, sulfurous acid, mercuric iodide, ethyl acetate and pyridine. A diagram, Figure 3, lists the toxicity of some of the substances mentioned.

An inoperable elevator is located at the approximate center of the building. It serviced at one time all four floors. Stair wells that also provide access to all four floors are located at the northeast and southwest corners of the

building. Complete diagrams detailing the layout of each floor is attached (refer to Figures 4,5,6 and 7).

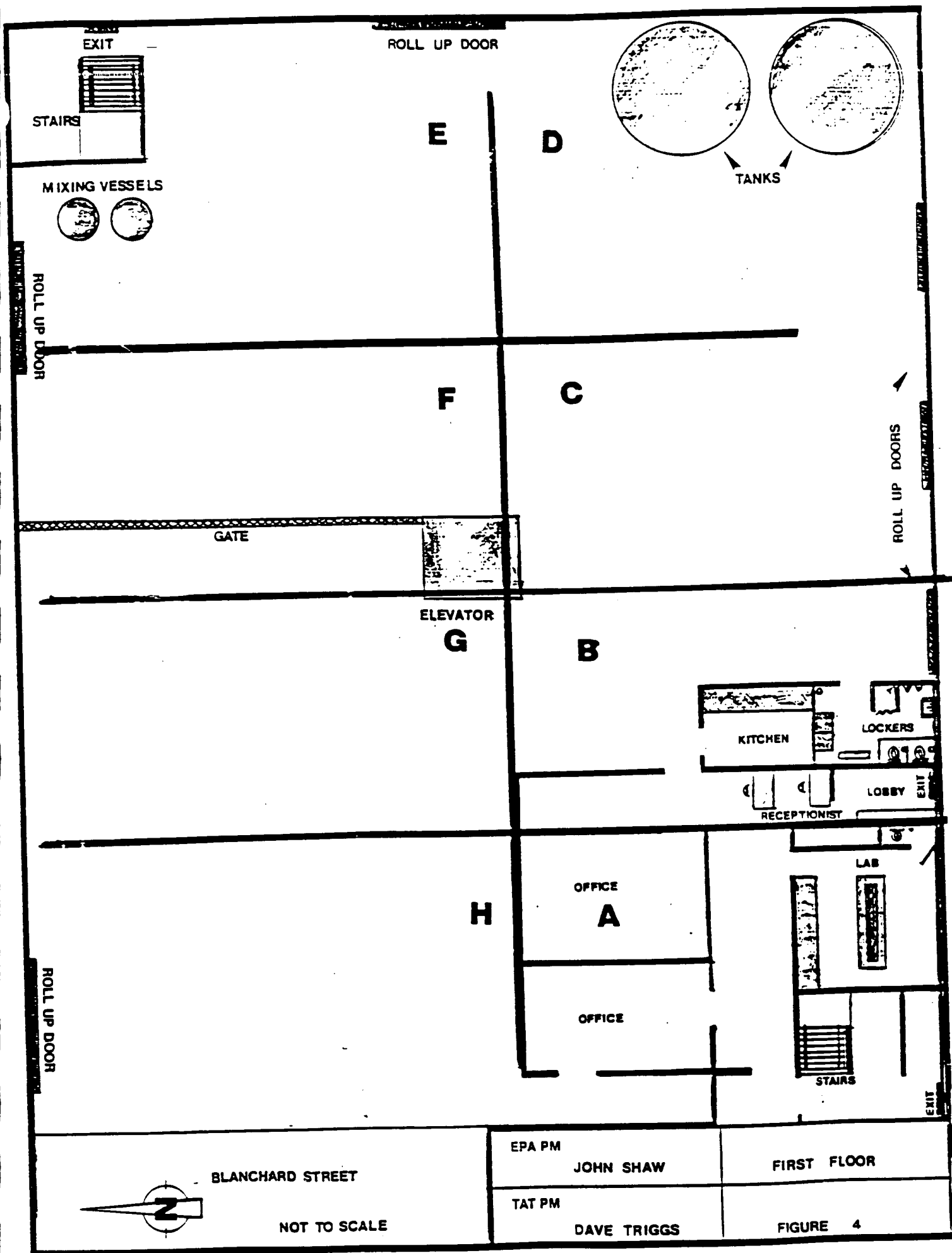
## 1.2 Initial Situation

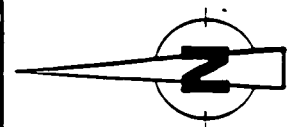
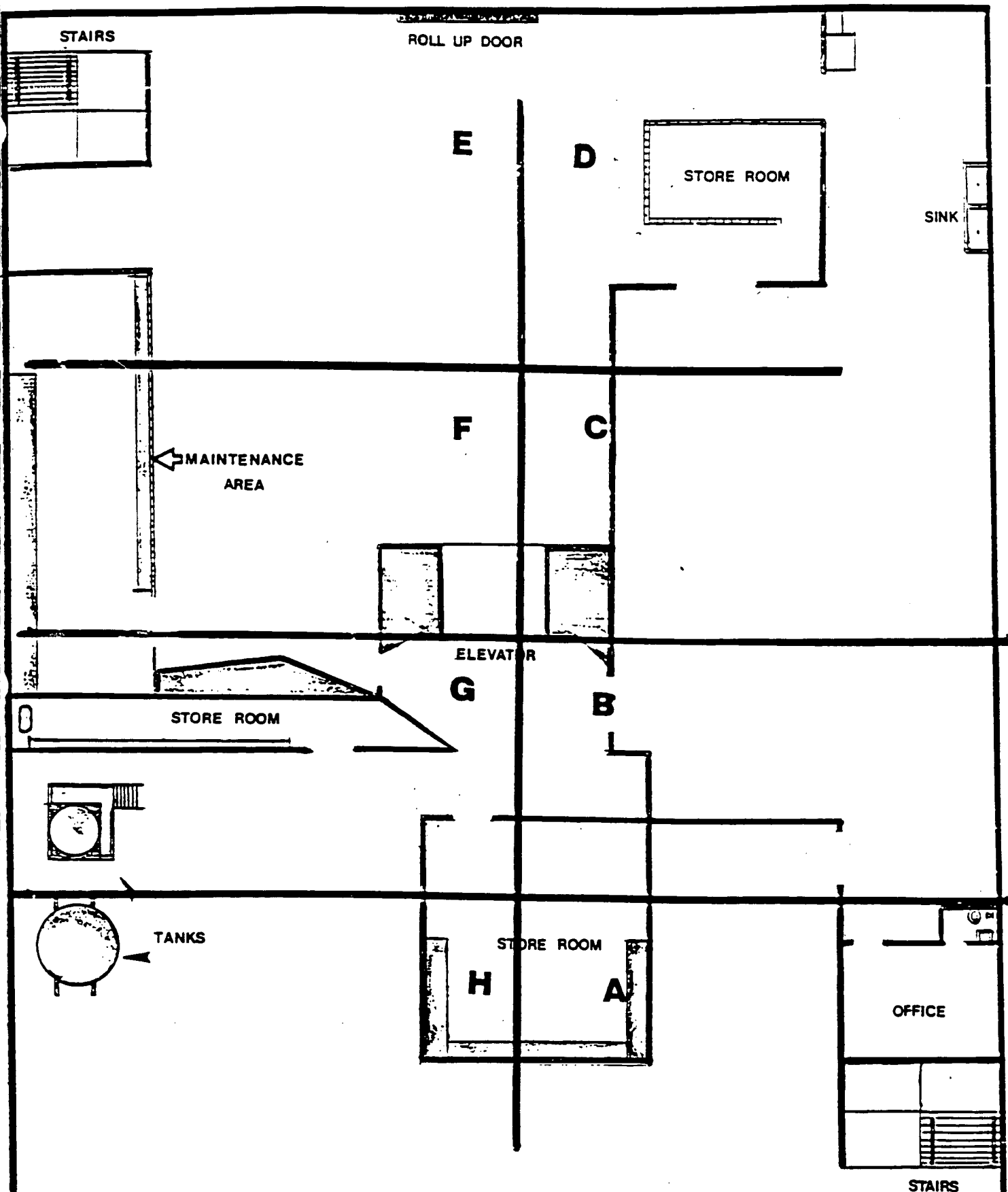
In August 1986, a Newark Fire Department inspection reported the site to the officials of the City of Newark and the New Jersey Department of Environmental Protection (NJDEP). The NJDEP performed a preliminary site assessment. It was reported that there were over 50 drums, 450 laboratory containers, 50 storage tanks and miscellaneous debris. Leaking drums of chemicals were found. Outside the building, piles of spent photographic film were found.

The NJDEP did not do any sampling but from the labels on laboratory bottles and drums, hazardous materials were noted such as alkalis, acids, ignitables, peroxides, nickel powder, zinc dust and shock sensitive including methy ethyl ketone peroxide.

The Police and Fire Departments continued to report break-ins and vandalism.

In June 1987, the NJDEP requested that the United States Environmental Protection Agency (EPA) take appropriate remedial actions at the site.





BLANCHARD STREET

NOT TO SCALE

EPA PM

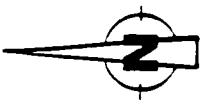
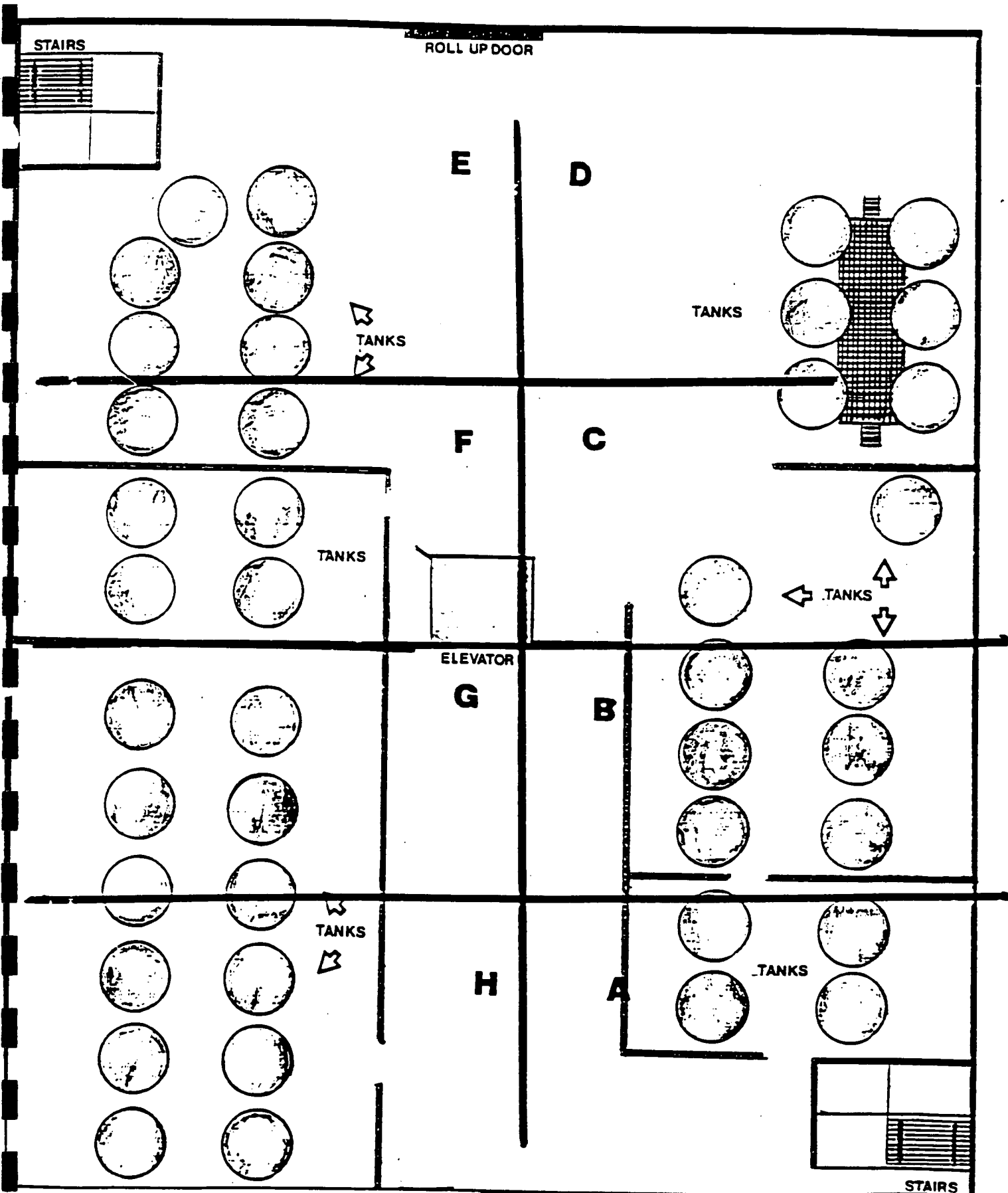
JOHN SHAW

SECOND FLOOR

TAT PM

DAVE TRIGGS

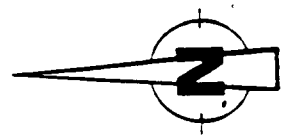
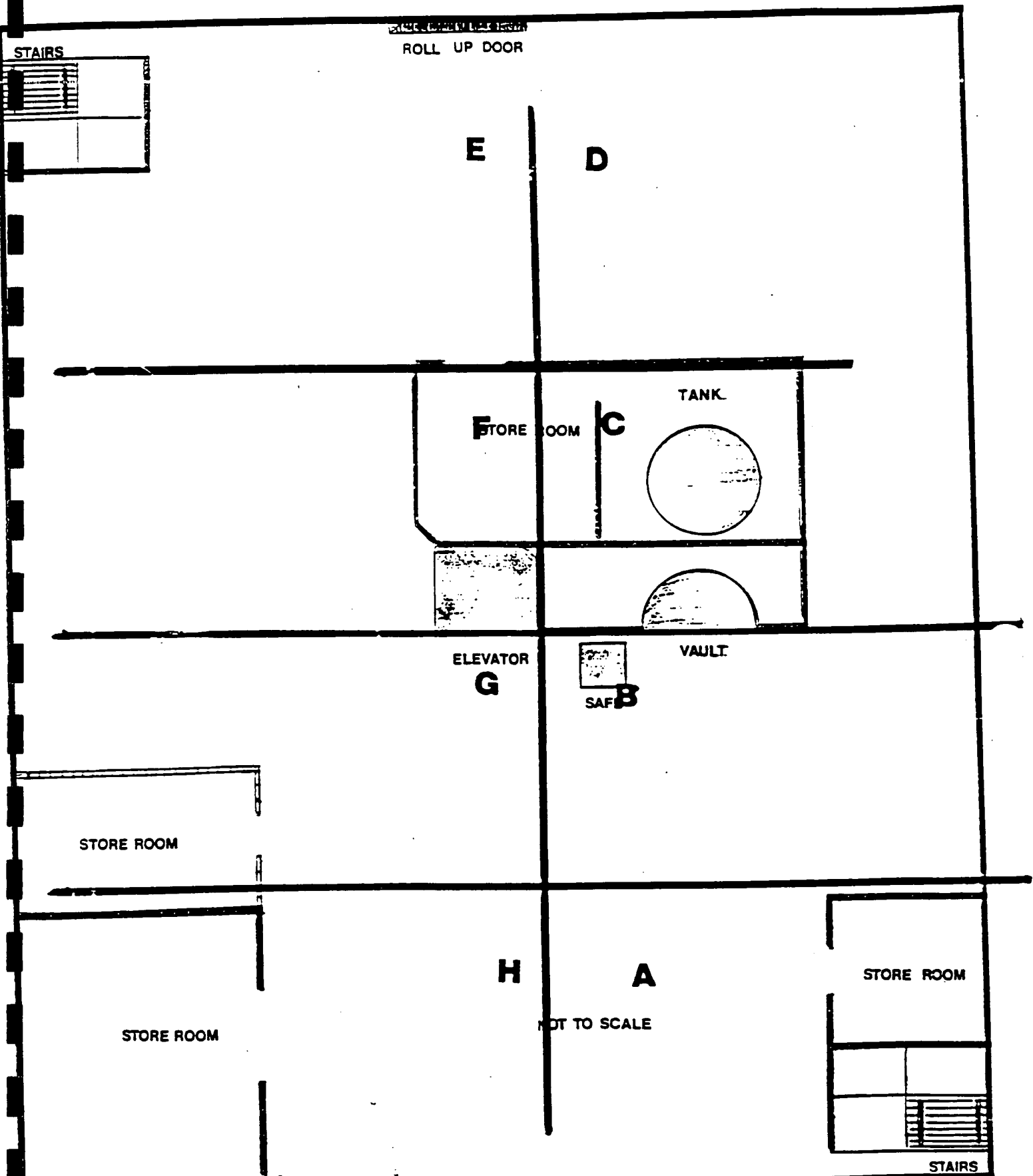
FIGURE 5



BLANCHARD STREET

NOT TO SCALE

EPA PM	JOHN SHAW	THIRD FLOOR
TAT PM	DAVE TRIGGS	FIGURE 6



BLANCHARD STREET

EPA PM	JOHN SHAW	FOURTH FLOOR
TAT PM	DAVE TRIGGS	FIGURE 7

In June and July, 1987, site assessments were conducted by the EPA and its Roy F. Weston Technical Assistance Team (TAT). The inspections confirmed the assessment by the DEP, and in addition air monitoring revealed the presence of hydrogen cyanide, organic vapors and asbestos. Also, asbestos was found in the insulation on the elbow of piping at the main entrance to the building.

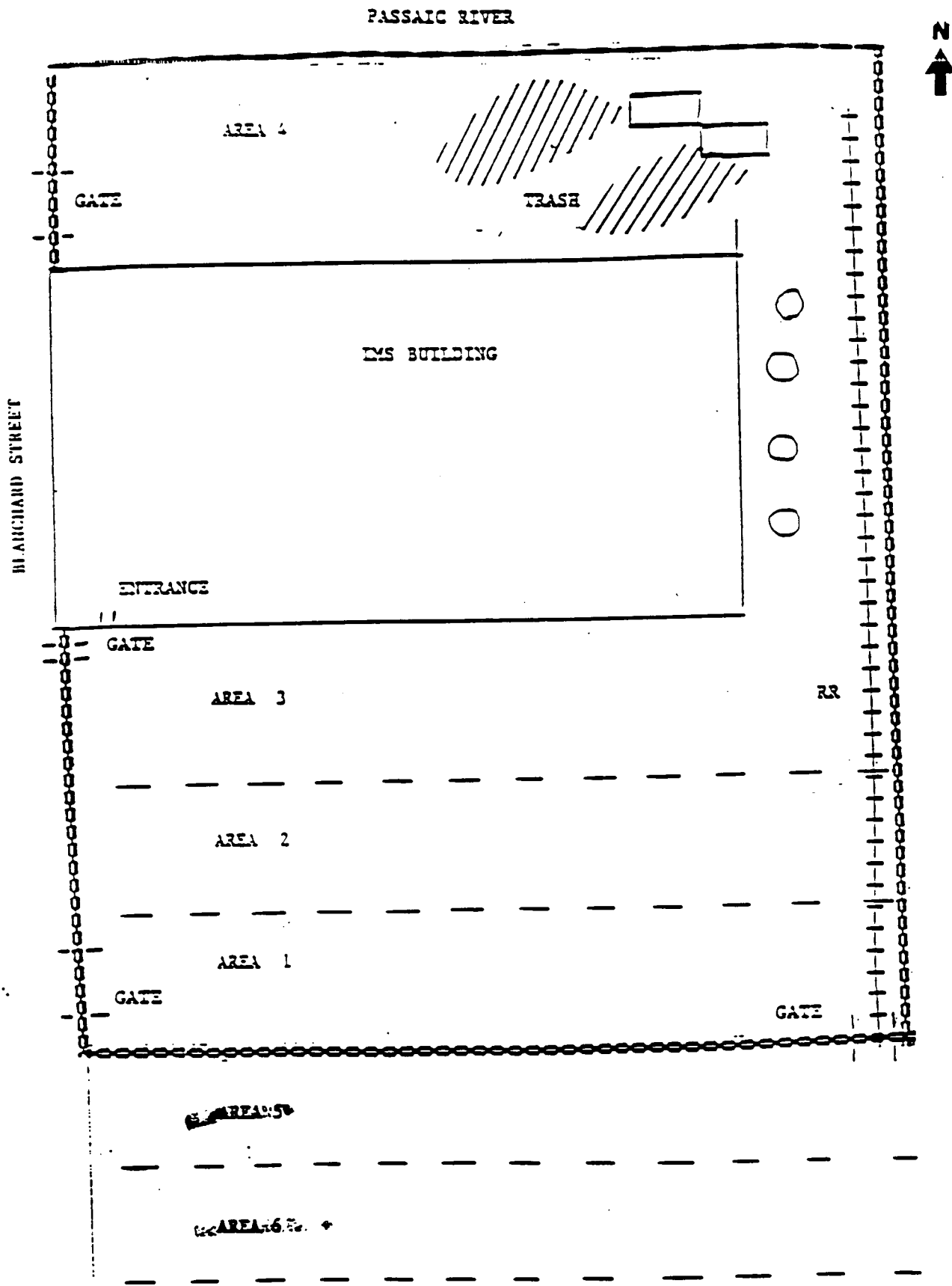
### 1.3 Site History

I.M.S was a precious metals refining facility that operated up until November 1984. The facilities principal operation involved the recovery of silver from spent photographic film, the recovery of gold from used electronic circuit boards, and the upgrading of medium grade gold to bullion grade. I.M.S. filed for Chapter 11 on April 15, 1982. The filing was changed to involuntary Chapter 7 on January 6, 1986. Salable equipment was then auctioned off by the court appointed trustee, Santo J. Lalomia, Esq. After payment was made to creditors, the reported assets remaining were approximately \$1,700 in cash plus the value of the property. The site was left abandoned with many different types of dangerous materials both inside the building and outside throughout the grassy lot, where the chances of human contact were high. In the interim, the City of Newark refused to foreclose on some \$98,000 in back property taxes.

A formal request by the State was also made to the USEPA to assist in removal of the dangerous materials that still remained on-site. The site had been subject to numerous break-ins during its abandonment.

#### 1.4 Cause of Discharge(s)

Approximately 30 cubic yards of finely cut up spent photographic film were found on the northern lot in piles, completely exposed to the environment. Laboratory analysis of the film (which is situated about thirty feet from the Passaic River) revealed the presence of both cyanide and silver. Soil samples taken at designated quadrants throughout the grassy lot have shown elevated levels of heavy metals, principally copper, lead, mercury, silver, and beryllium. The highest levels of beryllium were found on the south side of the building in areas 1,2, and 3. (See Figure 8, Soil Sampling Map). A partially decomposed fiber drum was found lying on the southwest lot with its contents (a white crusty substance) spilled onto the ground. Containers of nickel powder and zinc powder were found with some of their contents spilled, on the east end loading dock. Many of the drums and containers inside of the building were found without lids. Some drums had leaked. Air samples taken inside of the building revealed the presence of asbestos and cyanide in the air. Both are considered to be hazardous substances.



**WESTERN**

SPILL PREVENTION &  
EMERGENCY RESPONSE DIVISION

EPA PM  
JOHN SHAW

FIGURE 8

In Association with ICF Technology Inc., C.C. Johnson & Associates, Inc., Resource Applications, Inc., Geo/Resource Consultants, Inc., and Environmental Toxicology International, Inc.

TAT PM  
MICHAEL MENTZEL

Soil Sampling Map

Based on a preliminary assessment, information obtained from the NJDEP and successive site visits, a detailed list of the materials and their estimated quantities was drafted. The materials were found in over 100 drums, 1100 laboratory containers, in bags and as insulation. One hundred three (103) empty drums and containers along with piles of dust ridden cardboard, paper debris, metal scrap, and 100 cubic yards of spent film were also noted. Of the materials found, at least eighteen were CERCLA designated hazardous substances. Twelve of these were designated as extremely hazardous under Title III (SARA). The materials were broken down into the following categories, asbestos, flammables, cyanides, strong acids, strong bases, heavy metals, shock sensitive, hydrazines, peroxides, oxidizers, base neutral solids and unknowns. For a more detailed list of the materials (refer to DRUM INVENTORY FILE SUMMARIES, APPENDIX D).

#### 1.6 Efforts to Obtain Response from Potential Responsible Parties

Starting in January 1987, the City of Newark and the NJDEP to no avail attempted to contact the previous owners and convince them to assume a leading role in the cleanup of the site. Efforts were made and continued under the EPA to have a potential buyer purchase the property and clean it up.

January 17, 1986      Mr. Santo J. Lalomia, the court appointed Trustee proceeds to sell off I.M.S. assets in order to pay creditors.

August 19, 1986      Members of the Newark Fire Department inspected and secured the site by placing locks on gate and building entrances. Officials from the City of Newark and the NJDEP were notified about the presence of dangerous substances and the threat that they might pose to the community.

August 27, 1986      The NJDEP contacted the bankruptcy trustee, Mr. Santo Lalomia to inform him of the threat the site poses to the community. Mr. Lalomia responded by stating that there was not enough money left to attempt a cleanup of the site.

May 8, 1987          The NJDEP performed a site assessment that provided preliminary information on the quantities and types of materials that were present. The list pointed out the existence of over 50 drums, over 450 laboratory containers, 50 storage tanks and miscellaneous paper debris. During the

inspection NJDEP uprighted a leaking 55 gallon drum of hydrochloric acid and a leaking 55 gallon drum of hydrazine hydrate.

June 1, 1987

Evidence of periodic vandalism prompts the NJDEP to request the assistance of the USEPA to take a lead role in removing the immediate threat the site poses to the surrounding community. In the interim the NJDEP continues to pursue potential buyers for the property. Region II's Site Compliance Branch and Office of Regional Counsel initiates a Responsible Party search to identify the existence and financial capabilities of any potential responsible parties. The only responsible parties identified are, the incorporators of I.M.S.

June 18-19, 1987

Members of the USEPA, NJDEP and TAT conduct a preliminary assessment of the site. The joint survey conducted air monitoring through the use of portable instruments. The only readings noted to have exceeded background levels were on the HCN monitor unit which showed a reading as high as 3ppm in some areas. The assessment team also noted

Air monitoring was again conducted, showing only one area of the building where readings were above background. On the fourth floor the OVA (survey mode) showed 8-10 ppm of organics in the air. The hydrogen cyanide Draeger tube indicated 20 ppm.

July 17, 1987

Air samples were taken by TAT on all four floors of the building, as well as upwind and downwind from site. The samples specifically addressed asbestos, acids, ammonia, cyanides, hydrazines, hydrogen sulfides, sulfur oxides and nitrogen oxides.

October 16, 1987

On a site security check up, EPA discovered a break-in. Decon bags, inside the opened door, were torn open.

Outside the rear of building (by the hoist) were found 2 drums of nickel powder and 3 pails of zinc powder.

October 17, 1987

EPA secured two doors which had been broken into.

October 19, 1987

EPA called NJDEP to inform them of break-in.

October 28, 1987      Soil samples were taken by TAT around the perimeter of the building. Sampling points were taken in designated quadrants mapped out to insure that representative samples would be taken. The samples were sent to the Control Laboratory Program (CLP) to be analyzed for heavy metals, gold, EP toxicity, cyanides PCBs and pesticides. A map showing the sampling areas is attached (refer to Figure 8).

October 29, 1987      Members of the Technical Assistance Team placed a tarp over five containers found on the east end loading dock. The containers (suspected of being brought out of the building by vandals) consisted of two 30 gallon pails of nickel and three 5 gallon pails of zinc.

December 11, 1987      Results on the soil samples indicate the presence of high levels of mercury, lead, zinc, copper, chromium and beryllium. All of the levels exceed state guidelines for these substances.

December 21, 1987 Composite soil samples were taken by TAT outside the property's southern fenceline. The sampling area is owned by the Fine Pigments and Colors Company. The samples were analyzed for the same contaminants as those taken on I.M.S. property.

January 27, 1988 Soil sample results indicate that PCB and pesticides are not present in the soil.

February 10, 1988 The Director of the Emergency and Remedial Response Division, Region II, USEPA approves an Expedited Action Memorandum for the removal of shock sensitive materials. The total project ceiling is \$230,000.

February 22, 1988 The USEPA approves a sum of \$75,000 to initiate the first phase of the removal. The planned use for the money was to secure the building, stage and segregate chemicals, dispose of shock sensitive materials and neutralize acids.

February 24, 1988      Members of EPA, TAT and OHM met at EPA'S office in Edison, New Jersey to review a draft work plan that details the goals and procedures for the first phase of the removal. The plan outlined the following tasks to be accomplished:

1. Improve site accessibility
2. Segregate and labpack chemicals
3. Dispose of shock sensitive materials
4. Recycle useable material
5. Sampling for disposal criteria
6. Neutralization of acids on-site
7. Ensure site security

February 25, 1988      The appointed response manager from OHM was given a site tour by EPA and TAT. The purpose of the tour was to acquaint him with site specific elements that will be incorporated into the workplan.

March 2-3, 1988      OHM electricians installed electrical panels inside the boiler room on the south side of the building in preparation for the site start up.

March 7, 1988      Mobing of ERCS, TAT and EPA at the site.

March 8, 1988

Roadstone spread over the soil south of the building to protect against beryllium laden dust.

March 10, 1988

Newark Fire Department Hazmat team makes a practice entry into the building. The Star Ledger will report the event in a feature article about the Hazmat team. EPA's activity at the site will also be discussed.

March 22, 1988

A partial demobe took place while waiting for the disposal facility to remove and incinerate some of the more dangerous chemicals. A technical representative of a potential purchaser of the property visited the site.

April 1, 1988

Chem Waste Management arrive to do the lab packing of the more dangerous chemicals and to transport to their incinerator for destruction. The command post and guard service remain on site.

April 2, 1988

This interval in time is spent preparing profiles for the remaining known laboratory chemicals and recycling some of the other chemicals.

April 21, 1988

Hydrazine sulfate recycled by Park Trading Company.

April 26, 1988

One day mobe/demobe of ERCS to ship out one 55 gal drum of aluminum powder to Alcan for recycle.

May 3, 1988

Mobed ERCS to cut weeds, rearrange lab chemicals for safety and to remove some of the debris from the building along with garbage in a rolloff. The next day the guard service was terminated and the command post was removed.

June 17, 1988

A planned mobe for June 20 to remove the remaining known lab chemicals was cancelled because the job was close to the overall ceiling. Further site work would commence when the full Action Memorandum was approved.

September 14, 1988 The full Action Memorandum was signed today permitting the completion of the removal action.

September 20, 21 1988 Representatives from EPA, TAT and OHM revisited the site to monitor the air inside of the building and to inspect the overall site conditions. Another building break-in occurred where vandals apparently made off with items such as a portable drum lifter, lights and two containers of zinc. No other materials were found missing. OHM updated their drum inventory and delineated working zones in preparation for the next phase.

October 5, 1988 EPA, TAT and a representative from OHM met to discuss the draft workplan detailing the next phase. The plan was later reviewed and accepted in principle by the OSC.

October 7, 1988 A site tour was given by TAT to familiarize the new Response Manager with the site.

October 11, 1988 OHM, TAT and the OSC remobed to carry out the workplan: stage drums, labpack, sampling, characterizing, restaging for bulking,

crushing unknown lab chemicals and crushing empty drums.

October 29, 1988	At the site, the crushing of unknown chemicals with a backhoe, Cat 215 is performed.
November 3, 1988	Except for the security guard, the command post and the decon trailer, all else was demobilized.
December 28, 1988	Advertisement on the Administrative Record appears in the Star Ledger.
January 18, 1989	Removed large blocks of ice from the tarp covering the crushed lab containers' rolloff. ERCS resecured the tarp.
February 1, 1989	The interval since the demobing was spent by OHM in preparing profile sheets for disposal of the waste streams based on the laboratory analyses.
February 2, 1989	EPA, TAT and ERCS mobilize for one day to take additional samples required by the disposal firms.

March 6, 1989

EPA, TAT and ERCS remobilize to initiate the removal of the spent photographic film since approval had been granted by Rollins Incinerator. However, a snow storm intervened and the work had to be postponed.

March 28, 1989

EPA, TAT and ERCS remobilize to remove almost all the waste from the site. Besides the film, labpacks, drums and rollofs would be shipped to disposal facilities.

April 13, 1989

EPA, TAT and ERCS begin demobilizing leaving some drums and rollofs on site until slots were opened for them at disposal facilities which had already agreed to accept the wastes. The Rollins Incinerator was shut down and was not immediately able to receive the shipments. Also, two drums discovered toward the end of the cleanup awaited acceptances by the disposal facilities.

May 3, 1989

Except for the last aforementioned two drums all other waste was removed from the site when drums of flammable liquids and solids and the photographic film was shipped to

Rollins Incinerator.

July 20, 1989

The last two drums, one solid and one liquid were shipped.

August 15, 1989

EPA, TAT, ERCS and an asbestos subcontractor, Construction Management Associates (CMA) arrive at the site to begin the removal of asbestos insulation from the piping inside the building. OHM, besides monitoring CMA, also installed plywood all around the crawlspace of the building to inhibit access to the asbestos insulated piping located in the crawlspace.

August 21, 1989

The asbestos, which had been placed in bags and decontaminated clothing, etc. were removed from the site by CMA and disposed of in a proper landfill. The City of Newark was notified by CMA, and the asbestos removal was approved by the City's inspector. At that time, TAT and the OSC made an entry for the first time in level D to inspect the building.

response technicians. A chemist was mobilized on-site for the sampling and bench testing portions of the removal.

A command post and decontamination trailer were again setup along the southern end of the corrugated steel fence. Two rollofs were brought on-site. A 10 cubic yard rolloff used to store common garbage, and a 30 cubic yard rolloff used to dispose of cardboard from inside the building and cut vegetation from the lot. Repairs were made to the loading dock stairways on the east and southside of the building, and to the rollup doors and entry exit points of the building.

Over a period of twenty-one working days, the following tasks were accomplished: 1) drums were sampled, characterized and staged in compatible groups; 2) empty drums were crushed; 3) large third floor tanks and pipes were checked for contents (empty); 4) lab packing of remaining unknowns; 5) crushing of unknown lab chemicals; and 6) sweeping the dust laden floors.

On November 3, 1988, the site was again demobed. With all of the materials on-site staged, sampled, secured and classified, the remaining task involved with the removal was locating reputable disposers. In the interim all personnel were demobed from the site with exception of a security

P34, P35  
P36 & P37  
(?)

## 7.0 WASTE CONSOLIDATION AND REMOVAL

P39  
To  
P53 (?)

### 7.1 Recyclable Material

Materials considered reusable or recyclable were given back to their manufacturer or similar industrial facilities that were willing to accept them. The recycling program saved in disposal costs while financially benefiting businesses that received the materials. The following items were either recycled or reused, sulfur dioxide, acetylene, aluminum powder, nickel powder, hydrazine sulfate, and aqueous fire foam.

### 7.2 Radioactive Materials

During the segregating process, two small containers were found, one marked Np (the atomic symbol for neptunium), and the other labeled gadolinium. Both were listed as potential sources of radiation. The two substances (both powders) were housed in glass containers approximately 100 cc in volume. Tests with a Bicron Radiation Meter showed no detectable levels of alpha, beta, or gamma particles. Although based on the field test the containers were not considered radioactive, they were still treated with extreme caution until other tests could be implemented by a radiation specialist.

#### 7.4 Drums

Based on compatibility tests conducted on-site, drums consisting of acid solids, acid liquids, peroxide solids, base neutral solids, and flammable liquids were bulked into 55 gallon drums. Working in level B and monitoring with CGI, response technicians bulked the materials on the first floor, consolidating it into seventeen drums of base neutral solids, one peroxide solids drum, six acid solids drums, and three oxidizer solids drums. The drums were shipped out on April 7, 1989 to a hazardous waste landfill in Emelle, Alabama. Consolidating the materials reduced the volume needed to be shipped thereby reducing costs. On April 13, 1989 eight 55 gallon drums containing acid liquids were sent to SCA Chemical Services, Inc., Newark, New Jersey for treatment and disposal.

On April 17, 1989, one partially filled 55 gallon drum containing 54% hydrazine solution was sent to BDT, Inc., Clarence, New York for treatment and disposal. One 55 gallon drum containing potassium cyanide and one 55 gallon drum containing sodium cyanide were sent to Cyanokem, Inc., Detroit, Michigan for incineration.

Later two 55 gallon metal drums containing unknown materials were found in a box trailer located on the northeast end of the property. Working in level B protection, response technicians removed, remotely opened (with a backhoe) and sampled the two drums. Preliminary laboratory results indicated that one drum contained organic liquid, the other organic solid. OVA readings over openings in the drums showed levels ranging from 8 ppm over the solid material to 20 ppm over the liquid. The samples collected were sent out to ETC labs located in Findlay, Ohio for detailed analysis, necessary for classifying and disposing of the materials. The two were placed into overpack containers and moved into the first floor of the building until arrangements could be made for their disposal. These two drums, were shipped on July 20 to Frontier Chemical in New York for later disposal by incineration. (See DISPOSAL OF HAZARDOUS WASTE STREAMS, TABLE 1.)

#### 7.5 On Site Treatment

A 100 lb. bag of sodium nitrate and a 50 lb. bag of HTH calcium hypochlorite were separately discharged into the sanitary sewer under the approval and supervision of the Passaic Valley Sewage Authority (PVSA). An Inspector representing PVSA was on-site to pH the solution prior to discharging it into the sewer. Each material was placed

TABLE 1

## DISPOSAL OF HAZARDOUS WASTE STREAMS

DESIGNATION	NUMBER OF DRUMS	DISPOSAL TYPE	FACILITY/STATE	DATE LEFT SITE
Labpack	6	Incineration	TWI, IL	03/15/88
Labpack	17	Incineration	TWI, IL	04/01/88
Crushed Unknowns	1-30 yard rolloff	Landfill	CWM, IN	03/28/89
Film	480	Incineration	Rollins, NJ	03/31/89 04/05/89 04/07/89
Lab. Packs	82	Incineration	TWI, IL	04/12/89
BNS	17	Landfill	CWM, AL	04/07/89
OS	3	Landfill	CWM, AL	04/07/89
PS	1	Landfill	CWM, AL	04/07/89
AS	6	Landfill	CWM, AL	04/07/89
AL	8	Wastewater Treatment	CWM, NJ	04/13/89
Potassium Cyanide	1	Incineration	Cynoken, MI	04/17/89
Sodium Cyanide	1	Incineration	Cynoken, MI	04/17/89
Hydrazine	1	Incineration	BDT, NY	04/17/89
Debris	3 - 30 yard rolloffs	Landfill	CWM, AL	04/19/89 04/21/89
Film	17	Incineration	Rollins, NJ	05/03/89
FL	3	Incineration	Rollins, NJ	05/03/89
FS	2	Incineration	Rollins, NJ	05/03/89
FL	1	Incineration	Frontier Chemical, NY	07/20/89
FS	1	Incineration	Frontier Chemical, NY	07/20/89

## 9.0 SPENT FILM PACKAGING AND LOADING

Personnel and equipment such as a forklift, pallet lifter, industrial vacuum cleaner, drum agitator, shovels and miscellaneous tools and supplies were brought on-site. Electricians hooked up a heavy duty cable which extended from the south to the northeast end of the lot, up to the area containing the piles of photographic film. The cable provided electricity to the industrial vacuum cleaner expected to be used to gather up the film.

In order to accomplish the planned tasks a variety of excess equipment was required. During the first few days of the site setup, 40 bags of sawdust, a HAKO industrial vacuum cleaner, 6 cascade system air cylinders, a pallet lifter and a Hertz forklift truck were brought on-site. An area on the first floor of the building was setup for drum bulking. Sheets of visqueen were layed out, 55 gallon drums brought in, and satellites setup. The industrial vacuum cleaner was tested out in level C by the OHM response manager on a small area of the photographic film. Frequent clogging of the system had proven it to be inefficient to use as the principal tool for gathering the film. Shovels were instead used to collect the film flakes, while using the vacuum to skim the top layer of soil laying underneath the piles.

Approximately 135 cubic yards of spent photographic film containing cyanide and silver was loaded into 55 gallon fiber drums via hand shovels, high powered vacuum cleaner, brooms, and a backhoe. Most of the work was accomplished shoveling by hand in level D protection, since Draeger readings showed no detectable levels of cyanide. The piles, located on the north end of the lot, were loaded into fiber drums with a bottom and surface layer of sawdust for water absorption. With the piles removed, the remaining flakes scattered across the lot were picked up with the industrial vacuum and push brooms and drummed. A total of 497 drums were accumulated and sent to Rollins Environmental, Bridgeport, New Jersey for incineration. Miscellaneous debris such as decayed pallets, cardboard, bricks, paper and vegetation were placed into 30 cubic yard rollofs and sent to a hazardous waste landfill in Emelle, Alabama.

10.0

#### ASBESTOS ABATEMENT

##### 10.1 Location and Condition of Asbestos Containing Material (ACM)

The asbestos containing material was installed around pipelines near the ceiling in the warehouse area on the first floor - approximately 400 linear feet of air cell material together with elbows of what appeared to be white block material. Approximately 30 linear feet of mineral

**REFERENCE NO. 8**

Roy F. Weston Inc.

Field Logbook

For

International Metallurgical  
Services, Inc.

196 Blanchard Street

Newark, NJ 07105

Work Order: 04200-016-081-0002

Doc. Control. No. 4200-16-ACK E

International Metallurgical  
Services, Inc. (IMS)

Newark, NJ

WO: 04200-016-081-0002

## Table of Contents

<u>Activity</u>	<u>Page(s)</u>
-on-site Recon (2/9/93)	2-5
-photograph log	6

On-site Reconnaissance  
IMS

Tuesday, February 9, 1993

Personnel: Gretchen Chapman  
(Task Manager)  
Dennis Foerter

The purpose of this reconnaissance is to verify location of property as well as characterize the condition of any source areas.

~~at~~ 1415: Arrive at 196 Blanchard St., Newark, NJ.

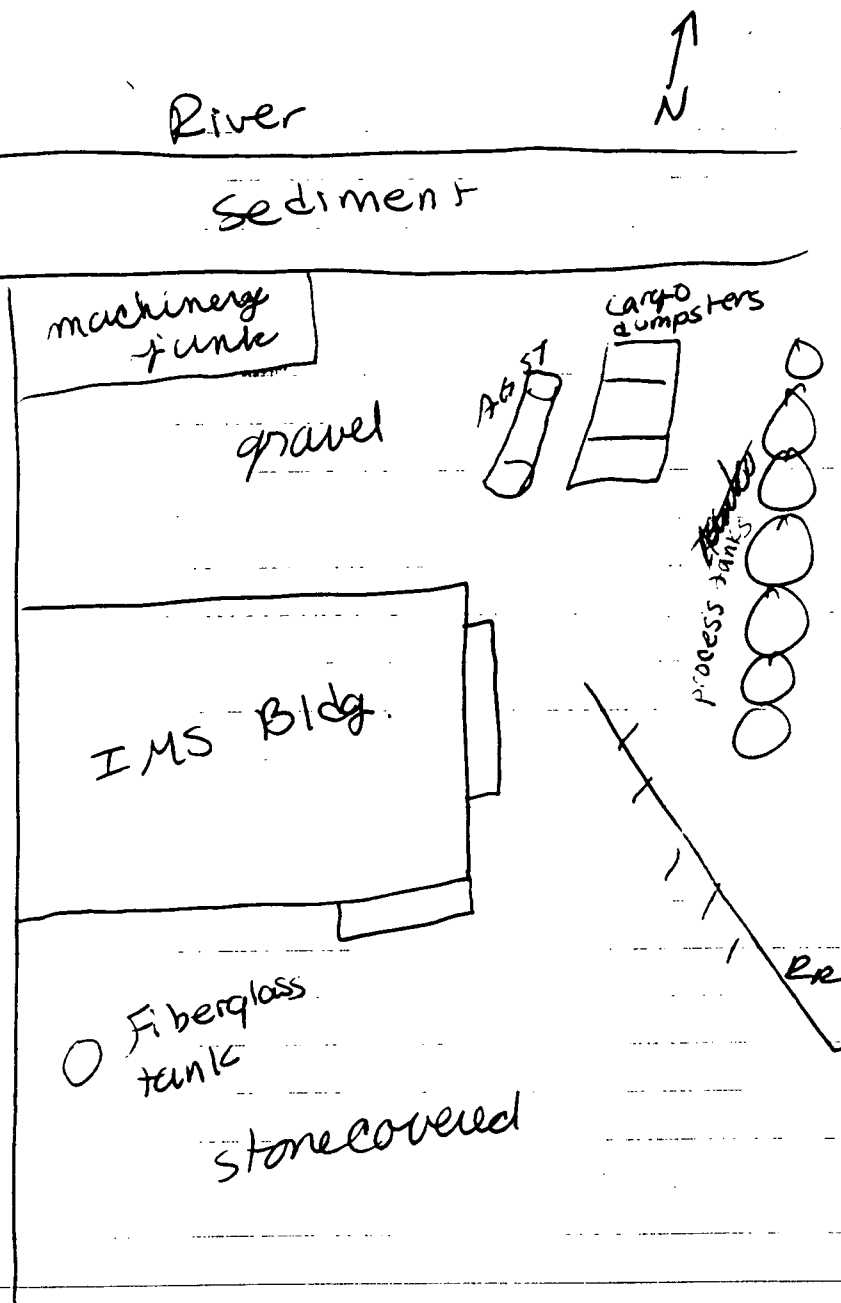
The site consists of a large abandoned building and scrap material. The site is bordered to the north by the Passaic River and is fenced in on all other sides, although the fence is not locked on Blanchard St.

The area is highly industrial. There are no residences or schools noted within 200' of the site.

- Runoff from the site into Passaic River.
- Old rusted machinery noted on site near the river.
- Drum (empty) with label "lacquer" noted.
- Large rusted AGST on site.
  - 7 apparent process tanks rusted and abandoned in a line.
- Abandoned RR track in ear.
- Some scattered drums
- No storm drains noted.
- No readings above background on HNa or ITCN monitors.
- No monitoring wells noted on-site although 3 are reportedly there.
- There is a large bank of sediment between the river and the Facility. (i.e. low tide)
- Drainage from the road and storm drains from upgradient facilities flow into the river (and sediment area) at the end of Blanchard St (next to IHS)

The facility is a former  
Precious Metals Recovery  
facility.

Blanchard St.



IMS  
196 Blanchard St.  
Newark NJ

Photograph Log  
onsite reconnaissance  
2/9/93

All Photographs taken  
by G. Chapman

<u>Photo #</u>	<u>Description</u>
----------------	--------------------

Note: Due to camera malfunction, none of the pictures taken during the on-site reconnaissance are available. However, photographs were retaken by T. Varner on June 2, 1993. See Photograph Log on next page

IMS  
Newark, NJ

Photograph Log  
June 2, 1993  
All photographs taken by T. Varner

<u>Photo No.</u>	<u>Description</u>	<u>Time</u>
1P-1 to 1P-4	Panoramic view from the end of Blanchard Street, looking northeast to southwest.	1135
1P-5 to 1P-7	Panoramic view of the northern end of the site, looking east to northeast from just inside the facility gate located at the northwest corner of the site.	1142
1P-8	Looking north at the tank located just west of the shipping containers	1151
1P-9	Looking north at the shipping containers	1153
1P-10, 1P-11	Looking northeast from the northeast corner of the building	1206
1P-12, 1P-13	Looking southeast from the northeast corner of the building	1208
1P-14	Looking south from the north-east corner of the building	1212

gone  
on site  
however,  
T. Varner  
sh Log on

IMS  
Newark, NJ

Photograph log (cont'd)  
June 2, 1993

1P-15 to 1P-17 Panoramic view of the southern section of the site, looking southeast to northeast from the sliding gate located in the southwest corner of the facility. 12:20

### Notes:

- Site vegetation is very thick and overgrown.
- Little business activity noted on adjacent properties; probably less than 100 workers within 200 feet of site property.
- Process tanks and shipping containers still on site.
- Building appears to have been broken into through small ground level opening on side of building facing street.

**REFERENCE NO. 9**

**MEMO****NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION**

TO File through Robert Zolner  
FROM David Beeman *AB* DATE 5-9-87  
SUBJECT INTERNATIONAL METALLURGICAL SERVICES, NEWARK  
SITE DESCRIPTION Case #86-08-19-03 File #U7-14-313

**I. Site History**

International Metallurgical Services Inc. operated at this site until November, 1984. Principal operations included the recovery of silver from used photographic film, recovery of gold from used electronic circuit boards, and the upgrading of medium grade gold to bouillon grade. The company president was Victor Pannone, formerly of Summit N.J., present whereabouts unknown.

IMS filed for Chapter 11 on 4-15-82. The filing was changed to involuntary Chapter 7 on 1-6-86 due to the failure of IMS to submit Financial Disclosure Statements and a Plan of Reorganization. Salable equipment was auctioned off by the Court appointed trustee, Santo J. Lalomia, esq., 140 Market St., Paterson, N.J. After payment to creditors, the reported assets remaining are approximately \$1,700 in cash and the building and surrounding grounds. Hazardous wastes remain in containers in the building.

**II. Site Location**

The site is located at 196 Blanchard St., Block 5001, Lot 50, Newark, Essex County. The site is bounded on the north by the Passaic River, on the west by Blanchard St., on the south by the vacant Fein Pigment Co., and on the east by a railroad right of way. This is a blighted industrial area with no residences. The nearest occupied building is a tavern, approximately 40 feet southwest, across Blanchard St.

The building is an all concrete and brick, four story structure fronting on Blanchard St. The building was constructed on piles, one to two feet above grade and is approximately 50 by 130 feet. It is approximately 25 feet from the Passaic River.

There is currently no utility service to the building. The upper floors receive enough natural sunlight to allow working without lights.

**III. Exterior**

The property is surrounded on three sides by fence. (see attached sketch) Access through a personnel gate and a sliding vehicle gate is restricted by padlocks. Access to the property can be gained along the embankment of the Passaic River. All doors to the building at ground level are locked from the inside, except one padlocked door on the southwest corner, inside the fence.

There are several large piles of what appear to be film scrap on the north of the building, along with scrap tanks, machinery, and piping on the north and the east. There are two 20 foot shipping containers on the north side. Container #1 contains scrap circuit boards, and two drums of unknown material. Container #2 is empty. A drum of unknown material has rotted and spilled its contents onto the ground next to container #1. This material is now solid.

There is a 1,000 gallon above ground tank on the south side of the building which may have contained fuel oil.

There is a tank wagon loading/unloading manifold on the south side of the building. A sign indicates products which may have used in this manifold, including methanol, isopropanol, cellosolve, butyl acetate, ethyl acetate, MIBK, and nitropropane.

No DEP sampling of soil or ground water has been performed. There have been conflicting verbal reports concerning soil samples taken by interested buyers. One reports finding high levels of chromium and possibly cyanides. Another reports finding nothing but "trace" levels of arsenic. Vegetative growth is active in most areas.

#### IV. First Floor

Area A: Cardboard and machinery scrap.

Area B: Three empty 400 gallon mixing vessels.

Area C: Four cubic feet of used fire brick.

Area D: 35 gallon open steel drum containing solid. Labelled sodium cyanide brick.

Area E: Heat treatment vessel?

Area F: 55 gallon drum labelled Kodak Developer Replenisher, (potassium hydroxide).

Area G: 55 gallon drum of hydraulic fluid, "Fyrquel."  
55 gallon drum, unknown, labelled "corrosive."

Area H: Four 5 lb. bottles of sulfurous acid, factory sealed in styrofoam boxes.

Area I: 20 gallon keg of ferric chloride, may be empty.

Area J: Three empty kegs of sulfuric acid.  
Two 55 gallon drums of hydrochloric acid (appear full).  
55 gallon open drum with unknown solid debris.  
Open drum, empty, labelled sodium cyanide.

Area K: Puddle on floor from leak above, pH = 10

Area L: Acetylene cylinder.

Area M: Three one gallon bottles of sulfuric acid.  
Three one gallon bottles of ammonium hydroxide.

Area N: Lump of unknown solid on floor.

Lab: Approximately 12' x 20'. Contains approximately 50 containers from several ounces to a gallon in size.

Items noted:

Sulfurous Acid	Potassium Thiocyanate
Ammonium Chloride	Sodium Bicarbonate
Sodium Borohydride	Sodium Hydroxide
Oxalic Acid	Ferric Ammonium Sulfate
Tartaric Acid	Sodium Formate solution
Cinchonine	Sodium Bromate solution
Several unknown solutions	

Offices: Filled with scrap paper, furniture, and assorted debris. Partitions are wood panelled and some may be framed with wood.

V: Second Floor

Area A: In cabinet, two 1 gallon bottles of unknown liquid. One can of unknown solid.

Area B: 55 gallon drum of nitric acid on cradle. Almost empty. The spout has broken off and the contents have emptied into a four liter beaker which has overflowed onto the floor. Floor is now dry. Liquid in beaker has pH = 0.

Area C: Six 5 gallon pails of "Microposit Remover 1112A" manufactured by Shipley Co. (alkaline corrosive)

Area D: Two 5 gallon pail of fire foam liquid (these are located on each floor near the stairwells).

Area E: 55 gallon drum of hydrochloric acid on cradle with spout. The spout appeared to be leaking very slowly so the drum was uprighted.

Area F: 55 gallon drum of hydrazine hydrate on cradle with spout. The spout was leaking into a 5 gallon pail so the drum was uprighted. Puddle on floor had pH = 11 in this area and pH = 7 toward area E. Neutralization may have occurred. This is the material which has gone through a crack in the floor and puddled on the first floor. The contents of the pail had pH = 12 and was not ignitable. This material was replaced into the drum.  
One 35 gallon steel drum with spout with unknown.

Area G: 20 gallon keg of sulfuric acid.

- Area H: Four partially full bottles of methyl ethyl ketone peroxide. The room is not exposed to light.
- Area I: Paint and various paint thinners.
- Area J: Crucibles.
- Area K: 55 gallon drum, unknown.
- Area L: 20 gallon drum of Nuodex Naphthenate Cobalt, 6%, catalyst.
- Area M: 55 gallon drum of flake sodium hydroxide, half full.  
55 gallon drum of formic acid, partial.  
35 gallon fiber drum, unknown.
- Area N: 5 lb. container, may contain one lb. of cyanide salt.
- Area O: 100 lbs. of abrasive granules.  
10 lbs. of ammonium chloride.  
100 lbs. of sodium sulfite.  
50 lbs. of copper sulfate.  
100 lbs. of "HTH" dry chlorine.  
Three 35 gallon fiber drums, unknown.  
Six 5 gallon pails with unknown solid, possibly soot from crucibles.  
55 gallon steel drum, unknown.
- Area P: 55 gallon drum containing small sheets of copper?  
120 lbs. m-Nitrobenzene sulfonic acid, sodium salt.  
Three 50 lb. fiber containers with unknown solid.
- Area Q: 10 lbs. of white solid in fiber container. Hand labelled "hydrazine." Since hydrazine is a liquid at room temperature, this may be a hydrazine salt.

#### VI. Third Floor

Numerous 5500 and 7800 gallon tanks. All appear to be empty.

- Area A: 30 gallon fiber container, unknown solid debris.  
Five 30 gallon fiber containers, catalyst carrier.  
Six 30 gallon containers labelled 30% Hydrogen peroxide but with unknown solid.  
Two fiber drums, unknown.  
55 gallon drum, "Profexmatit" x-ray fixer replenisher.  
Open 30 gallon container with brown liquid, labelled.  
30% Hydrogen Peroxide.
- Area B: Empty drum storage.
- Area C: Eight 5 gallon pails of zinc dust.  
Two 300 lb. pails of nickel powder.

VII. Fourth Floor

Area A: Approximately 300 lab containers, one ounce to one quart,

packed haphazardly in boxes.

Noted were:

Sodium Chromate	Mercuric Iodide
Magnesium Dioxide	Propylene Glycol
Potassium Ferrocyanide	Potassium Bromide
Sodium Hypophosphate	Lithium Metaborate
Magnesium Chloride	Standard soap solution
Pyridine	Potassium Pyrosulfite
Phenol, 88%	Sodium Pyrophosphate
Methyl Ethyl Ketone	Freon 12
Ferric Oxide	Vanadium Pentoxide
Ferrous Sulfate	Sodium Silicoflouride

Area B: Approximately 100 lab containers, one ounce to one gallon, on shelves and floor. Noted were:

Barium Carbonate	Lanthanum Nitrate
Ammonium Citrate	Pyrogalllic Acid
Molybdic Acid	Ammonium Floride
Arsenious Acid	Calcium Carbonate
Methylene Blue	Magnesium Perchlorate
Ethyl Acetate	Boric Acid (broken)
Acetic Acid	Chromic Acid
Sulfurous Acid	

Area C: Bags of hydrated lime, soda ash, and borax.  
Three pallets of used fire brick.  
50 lbs. of tannic acid.

Area D: Bags of lime.

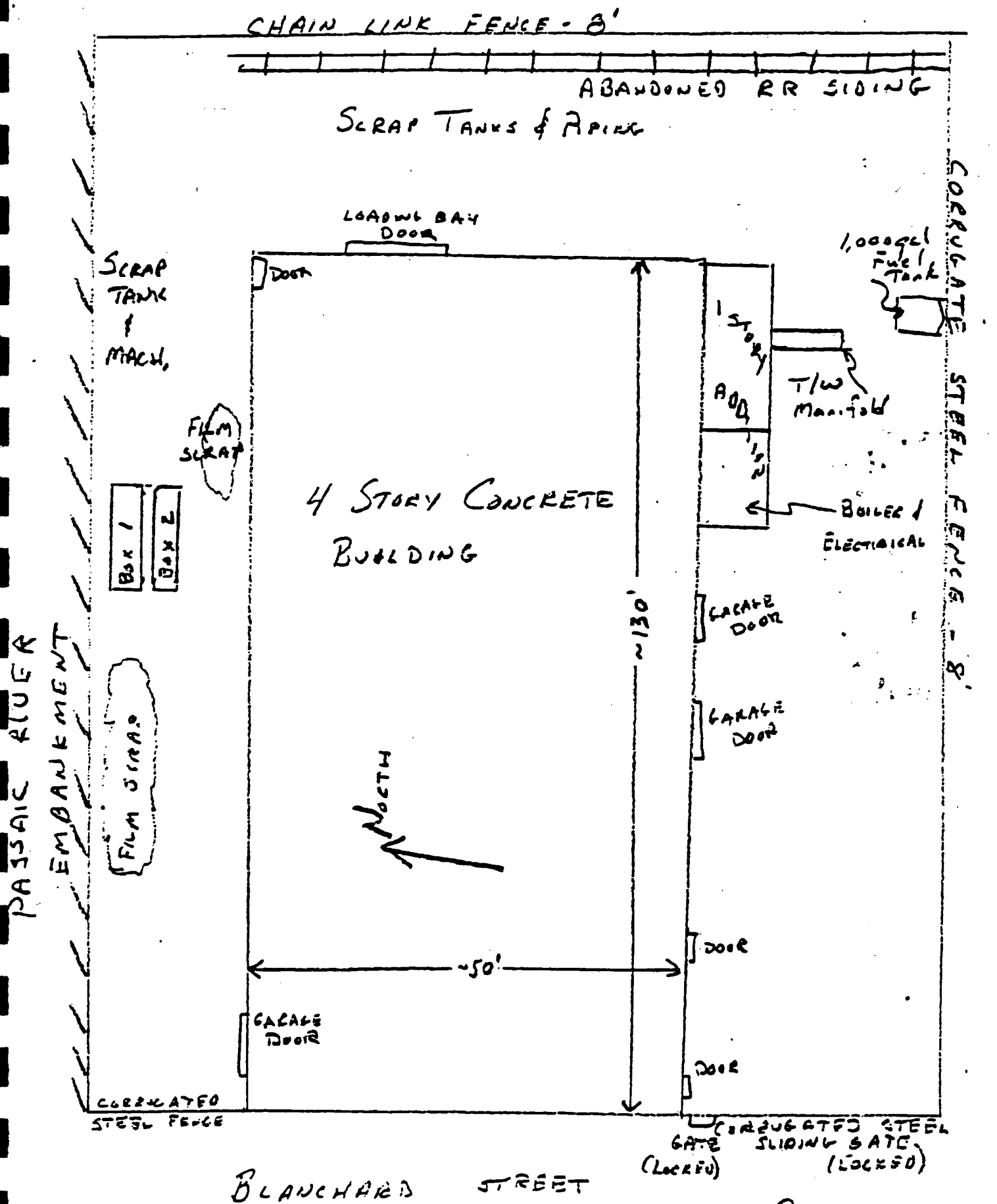
Area E: 250 lbs. of hydrazine sulfate.

Area F: Ladder to roof. Hatch was open.

Area G: Small leak in roof.

Area X: Crucibles.

INTERNATIONAL MEDICAL SERVICES - LOCATION  
(Not to Scale)



**REFERENCE NO. 10**

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## REGION II

DATE: SEP 12 1988

ECT: Preliminary Assessment; Request for Increase in CERCLA Removal  
Action Monies and Exemption from the Twelve Month Statutory  
Limit for the International Metallurgical Services Site, Newark,  
FROM: Essex County, New Jersey - ACTION MEMORANDUM

TO: *J. P. Sullivan*  
John J. Shaw, On-Scene Coordinator  
Response and Prevention Branch

William J. Muszynski, P.E.  
Acting Regional Administrator

THRU: *J. P. Sullivan*  
Stephen D. Luftig, Director  
Emergency and Remedial Response Division

I. EXECUTIVE SUMMARY

On June 3, 1987, the New Jersey Department of Environmental Protection (NJDEP) requested that the United States Environmental Protection Agency (EPA) take the lead role in removing the hazardous waste from a bankrupt precious metals refining facility, International Metallurgical Services, Inc. (IMS), located at 196 Blanchard Street, Newark, New Jersey. This project was delayed for several months as a result of a request by the NJDEP to the EPA to follow up on a lead for a buyer of the property who would then become a potential responsible party (PRP). Subsequent sampling and analyses by EPA have indicated the need to move forward with this removal action. Therefore, EPA has assumed the lead on the potential enforcement action and with NJDEP's knowledge issued notice letters to PRPs and a letter to the potential buyer for the property. Subsequently, on February 22, 1988, after negative response from the PRPs, EPA initiated an expedited Limited Scope Removal Action.

IMS is an abandoned four story facility. Abandoned at the site were approximately 180 drums, pails and bags, 1100 laboratory reagent containers, 50 storage tanks, several vats and 100 cubic yards of combustible spent acetate photographic film. Many of the containers have deteriorated and have released their contents into the environment. Eighteen CERCLA designated hazardous substances, twelve of which are designated as extremely hazardous, have been identified inside and outside the building. Asbestos and hazardous gases in the air have been detected. The building is grossly contaminated, and the facility has often been a target for break-ins and vandalism. Since releases have occurred at the site, it poses a threat to human health and the environment through fire, explosion and direct contact with extremely toxic substances.

EPA has performed a preliminary site assessment for removal action. This 27 page memorandum summarizes the results of that assessment and details the proposed removal action. If the

area of the Ironbound Section of Newark is located less than 1.5 miles to the southwest. More than 35,000 people live and work within one mile of the site. Approximately 40 feet southwest of the site is a busy tavern.

There is one building on the site which, except for a roof leak, appears structurally sound. The building, situated 10 feet from the curb line, is an all concrete and brick, four story structure. The building, constructed on piles one to two feet above grade, is approximately 50 by 130 feet. Figure 2 (page 22) provides a plan view of the building and property. An elevator shaft providing access to all floors is located near the center of the building. On the NE and SW corners of the building are the stairwells providing access to each floor. Attached to the building is a one-story addition, accessible only from the outside. Part of this addition was used for the boiler and electrical panel. The remainder of this addition, open to the outside, contained two crucibles. There are two garage doors on the southside, one on the northside and a loading bay door on the eastside. A hoist on the eastside has been repaired and used for removing drums, etc., from the upper floors and also for bringing in empty drums and other materials.

The building is surrounded on three sides by fencing and on the fourth side by the embankment to the Passaic River from which unauthorized access to the site may be gained. On the street side a very strong, secure, corrugated steel fence, including two sliding vehicle gates, runs from the northwest corner of the building to the river embankment and from the southwest corner of the building to the adjacent property line. A similar fence and gate runs along the southern property line. On the eastern side, a chain link fence with a small gate (welded shut) runs from the corrugated fence to the river embankment. The south side of the property is bordered by an abandoned site which is now being rehabilitated. Directly on the eastern side, inside the fence, are two unused railroad sidings. Behind this fence is the Norpack Corp., which is an active paper manufacturer. The river is about 25 feet from the building and the railroad siding is located approximately 25 feet east of the building.

The neighborhood is very old, industrialized, run down, and at night, very dangerous. Break-ins and vandalism at the site are a problem. Break-ins have been documented and before EPA was requested to assume the lead role, a story appeared in the newspapers, stating that there had been several break-ins. Subsequent to EPA's involvement, a

building door was forced open, another door was forced open (some bags containing contaminated wastes were opened) and nickel powder (an extremely hazardous substance) was moved to the outside of the building.

#### B. Brief History

IMS operated a precious metals refining facility at this site until November 1984. Principal operations included the recovery of silver from used photographic film, recovery of gold from used electronic circuit boards, and the up-grading of medium grade gold to bullion grade.

For some period of time to 1976, Commercial Solvents Corporation, a subsidiary of International Minerals and Chemical Corporation, occupied the site. Based on the labels on the tank wagon loading/unloading piping manifold, products or raw materials handled were methanol, isopropanol, cellosolve, butyl acetate, ethyl acetate, methyl isobutyl ketone (MIBK) and nitropropane. From the Directory of Chemical Producers-USA, Commercial Solvents Corporation was known to produce methanol and nitropropane at other sites and to produce ethyl alcohol at Newark.

IMS filed for Chapter 11 on April 15, 1982. The filing was changed to involuntary Chapter 7 on January 6, 1986. Salable equipment was auctioned off by the Court appointed trustee, Santo J. Lalomia, Esq., from Paterson, New Jersey. After payment to creditors, the reported assets remaining are approximately \$1,700 in cash and the building and surrounding grounds. Hazardous wastes remain in containers in the building. The City of Newark has refused to foreclose on some \$98,000 in back property taxes and is requesting assistance in removing the hazardous waste.

#### C. Quantities and Types of Substances Present

An inventory of the hazardous materials on-site was made during the limited removal action. The following remain inside the building: 180 drums, pails and bags, 950 laboratory reagent containers and 50 storage tanks. Contents of the storage tanks vary, with many considered to be unknowns. Approximately one hundred cubic yards of combustible spent acetate film and two 20 cubic yard shipping containers (one empty, the other filled with scrap circuit boards) are found outside the building near the Passaic River. There were eighteen CERCLA designated hazardous substances inside and outside the building. Twelve of these are designated as extremely

hazardous substances under Title III (SARA).

Labels from containers and air sampling indicate the chemicals listed in Table 1 (page 6) were present on-site. The toxicological effects of some of the compounds at IMS are listed in Table 2 (page 7).

Air monitoring has been conducted monthly since July, 1987 utilizing: an explosimeter, organic vapor meters (HNU and OVA), personal exposure meters for hydrogen cyanide and hydrogen sulfide (Monitox), particulates in air meter (mini RAM), and various chemical indicators ( Draeger tubes). The OVA exhibited readings of up to 8-10 units on the fourth floor of the building. The hydrogen cyanide Monitox exhibited readings up to 3 ppm on the third floor of the building. Sulfur dioxide, up to 4.9 ppm, was found during air sampling conducted July 17, 1987. Asbestos was found at 0.0008 fibers/cc NIOSH method 7400, in one area on the first floor of the building. (This finding occurred at a time of minimal activity). These levels of air contamination indicated the necessity of continued air monitoring and the need for the use of level C protection as a minimum.

The offices and laboratory are located on the first floor, occupying approximately 20% of the floor. The laboratory itself measures approximately 12 ft. by 20 ft. The remainder of the floor is an open area. Approximately 50 containers of chemical reagents were present in the laboratory. These containers range in volume from several ounces to a gallon. One contains a CERCLA designated extremely hazardous substance - sodium hydroxide; a second contains sulfurous acid which releases sulfur dioxide - a CERCLA designated extremely hazardous substance; a third contains ammonium chloride - a CERCLA designated hazardous substance; a fourth contains oxalic acid which has a STEL\* of 2 mg/m<sup>3</sup>. There were also several unknown solutions. In the open area of the first floor there are three empty 400 gallon mixing vessels, a possible heat treatment vessel, a 35 gallon drum containing

\*STEL is short term exposure limit (up to 15 minutes) per American Conference of Industrial Hygienists.

PEL is permissible exposure limit per National Institute for Occupational Safety and Health, and the Occupational Safety and Health Administration.

Low numerical values indicate that a high health threat to humans is posed by the chemicals.

one partially walled off area and a vault section. There are many bags of chemicals and approximately 1000 containers of chemical reagents. The containers which range in volume from one ounce to one gallon were dispersed haphazardly in boxes, on shelves and on the floor. Containers with CERCLA designated extremely hazardous substances are - phenol and vanadium pentoxide, sulfurous acid which releases sulfur dioxide - others contain EPA hazardous substances, mercuric iodide, ethyl acetate and pyridine, some others contain potentially explosive chemicals - MEK, magnesium perchlorate and lanthanum nitrate while yet others contain acetic acid STEL is 37 mg/m<sup>3</sup>, molybdic acid STEL is 20 mg/m<sup>3</sup>, chromic acid STEL is 30 mg/m<sup>3</sup> and bags of lime - PEL is 2 mg/m<sup>3</sup>, which indicate the extreme hazard of these materials. All the laboratory reagents were moved to the second floor.

Outside of the building, on the northside, are several large piles of combustible spent acetate photographic film scrap (approximately 100 cubic yards) which burned easily in a field test. There are a 20 cubic yard shipping containers on the northside which contains scrap circuit boards and two drums of unknown material. A drum of unknown material rotted and spilled its contents onto the ground next to the container. This material is now solid. On the eastside loading platform, were two green steel drums labelled nickel powder, one containing 300 lbs. and the other possibly more, both of which have been recycled. In addition, there were four 5 gallon pails of zinc powder. Nickel is a CERCLA designated extremely hazardous substance and is explosive in the powdered form. The nickel and zinc were formerly on the third floor (see above) but vandals hoisted them down to the platform. The zinc is now stored on the first floor.

There is a 1,000 gallon above ground tank on the southside of the building which may have contained fuel oil. The inside of the tank has not been tested for PCB contamination.

There is a tank wagon loading/unloading piping manifold on the southside of the building. A sign indicates products which may have been used in this manifold, including methanol, isopropanol, cellosolve, butyl acetate (an EPA hazardous substance), ethyl acetate, MIBK, and nitropropane (an explosive substance when shocked or heated). These same substances may be or may have been in some of the tanks located inside the building, all of which have yet to be inspected.

**REFERENCE NO. 11**

**PHONE CONVERSATION RECORD**

Conversation with:

Name Clerk  
Company Newark Tax Assessor's Office

Address \_\_\_\_\_

Phone (201) 733-3950

Subject Property size - TMS

Date 04, 26, 93

Time 14:52 AM/PM (PM)

☒ Originator Placed Call

☐ Originator Received Call

W.O. NO. 04200-016-081-0002

Notes:

A clerk told me that Block 50, Lot 5001  
(196 Blanchard Street) is 1.62 acres in size.

☒ File TMS

☐ Tickle File \_\_\_\_\_

☐ Follow-Up By: \_\_\_\_\_

☐ Copy/Route To: \_\_\_\_\_

Follow-Up-Action: \_\_\_\_\_

Originator's Initials TAV

**REFERENCE NO. 12**

SHEET 1 of 1SITE: International Metallurgical Services W.O. NO. 04200-016-081-0002  
CLIENT/SUBJECTTASK DESCRIPTION SSI

TASK NO. \_\_\_\_\_

PREPARED BY T. Varner DEPT \_\_\_\_\_ DATE 04/26/93

APPROVED BY \_\_\_\_\_

MATH CHECK BY \_\_\_\_\_ DEPT \_\_\_\_\_ DATE \_\_\_\_\_

METHOD REV. BY \_\_\_\_\_ DEPT \_\_\_\_\_ DATE \_\_\_\_\_

DEPT \_\_\_\_\_ DATE \_\_\_\_\_

Area of property = 1.62 acres = 70,567 ft<sup>2</sup> (Ref No. 11)

Area of facility building = 50 ft x 130 ft = 6,500 ft<sup>2</sup> (Ref No. 7, p. 4)

Ungravelled/Unoccupied property area = 70,567 ft<sup>2</sup> - 6,500 ft<sup>2</sup>  
= 64,067 ft<sup>2</sup> = 1.47 acres

*L*  
**REFERENCE NO. 13**

O.H. Materials Corp.  
P.O. Box 41  
Windsor, NJ 08561-0041  
609-443-2800

 OHM

June 23, 1988

Ms. Carla Dempsey  
Hazardous Site Evaluation Div.  
WH-548-A  
401 M Street, S.W.  
Washington, DC 20460

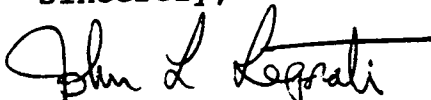
Dear Ms. Dempsey:

RE: Revision to Quality Assurance Data Report - March 1988  
International Metallurgical Services, D.O. 7445-02-032  
John Shaw, On-Scene Coordinator

The QA Data Report for March 1988 for the subject delivery order included two sets of analytical data for the dirt for each of the four floors of the building at the site. The two sets of data represented an original report, which had incorrectly stated aluminum concentrations, and a revised report which presented the correct aluminum concentrations.

To avoid any misinterpretation of the data obtained at the site, we are presenting enclosed herewith, a revision to our QA Data Report for March 1988 for D.O. 7445-02-032. The revised report presents only the corrected analytical data. We would appreciate your replacing the original QA Data Report for March 1988 for D.O. 7445-02-032 with the report submitted herewith.

Sincerely,

  
John L. Leporati  
Program Manager,  
ERCS Zone I

JLL:cd

pc: Michael Polito  


QUALITY ASSURANCE

DATA REPORT

March 1988

International Metallurgical Services

Delivery Order No. 7445-02-032

OSC: John Shaw

# PURCHASE ORDER SEARCH

VENDOR: 93284  
WASTEX INDUSTRIES INC.  
28 S. HANOVER ST.

P/O # J05763-038570-  
P/O DATE 03/22/88  
REQUESTOR JACK PERION  
APPROVAL JOHN LEPORATI

POTTSTOWN PA  
(215)327-0880  
P/O TOTAL

\$850.00

DEL DATE 03/29/88  
CONFIRMED 03/29/88

QTY	PART NO	DESCRIPTION	PRICE	ACCT #
1	NONE	TO COVER THE COST OF ANALYTICAL FOR SOIL 4 @ \$190.00 FOR METALS 1 @ \$45.00 FOR SILVER AND CYANIDE NOT TO EXCEED	850.00	650

astex Industries, Inc.

P.A. DER 46005  
N.J. DEP 77371

Licensed Analytical Laboratories

28 S. Hanover Street  
125 Main Avenue

Pottstown, PA. 19464 215/327-0880 FAX 215/327-9608  
Elmwood Park, N.J. 07407 201/791-6700

P.O. # 654-J5763-E-38570  
Sample # 880321.003

Customer # oh mat

For O. H. Materials Co.

P.O. Box 41

Windsor NJ 08561-0041

Attn: John Leporati

Date Sampled 3-14-88

4:00 PM

Date Rec. 3-21-88

10:10 AM

Sampled By GD/RL

Rec by SLG

Sample grab

PWS ID

Sample ID

Newark NJ US EPA Region II Proj. ~~XXXXXX~~  
2 5763E-006 Dirt from 1st floor

	General	
Cyanide Total	21.6	mg/kg
	Metals	
Aluminum	3,966	mg/kg
Antimony	0.56	mg/kg
Arsenic	12.1	mg/kg
Barium	16	mg/kg
Beryllium	0.23	mg/kg
Cadmium	22.8	mg/kg
Chromium	150	mg/kg
Copper	1,200	mg/kg
Iron	200,000	mg/kg
Lead	5,640	mg/kg
Mercury	3.24	mg/kg
Nickel	242	mg/kg
Selenium	3.40	mg/kg
Silver	200	mg/kg
Thallium	<1	mg/kg
Zinc	3,750 (490)	mg/kg

Signature

*Charles J. Homan*

astex Industries, Inc.

P.A. DER 46005  
N.J. DEP 77371

Licensed Analytical Laboratories

28 S. Hanover Street  
125 Main Avenue

Pottstown, PA. 19464  
Elmwood Park, N.J. 07407

215/327-0880 FAX 215/327-9608  
201/791-6700

P.O. # 654-J5763-E-38576  
Sample # 880321.004

Customer # oh mat

For O. H. Materials Co.

P.O. Box 41

Windsor NJ 08561-0041

Attn: John Leporati

Date Sampled 3-14-88

4:10 PM

Date Rec. 3-21-88

10:10 AM

Sampled By GD/RL

Rec by SLG

Sample grab

PWS ID

Sample ID

Newark NJ US EPA Region II Proj. #5763E  
3 5763E-007 Dirt from 2nd floor

	General		
Cyanide Total		4.10	mg/kg
	Metals		
Aluminum	1,551		mg/kg
Antimony	0.78		mg/kg
Arsenic	11.2		mg/kg
Barium	11		mg/kg
Beryllium	0.95		mg/kg
Cadmium	51.4		mg/kg
Chromium	164		mg/kg
Copper	6,480		mg/kg
Iron	290,000		mg/kg
Lead	2,360		mg/kg
Mercury	2		mg/kg
Nickel	372		mg/kg
Selenium	2.70		mg/kg
Silver	100		mg/kg
Thallium	<1		mg/kg
Zinc	4,900		mg/kg

Signature

*Charles J. Manna*

Wastex Industries, Inc.

P.A. DER 46005  
N.J. DEP 77371

Licensed Analytical Laboratories

28 S. Hanover Street  
125 Main Avenue

Pottstown, PA. 19464 215/327-0880 FAX 215/327-9608  
Elmwood Park, N.J. 07407 201/791-6700

P.O. # 654-J5763-E-38576  
Sample # 880321.005

Customer # oh mat  
For O. H. Materials Co.  
P.O. Box 41  
Windsor NJ 08561-0041  
Attn: John Leporati

Date Sampled 3-14-88 4:20 PM Date Rec. 3-21-88 10:10 AM  
Sampled By GD/RL Rec by SLG  
Sample grab PWS ID  
Sample ID Newark NJ US EPA Region II Proj. #5763E  
4 5763E-008 Dirt from 3rd floor

	General	
Cyanide Total	29	mg/kg
	Metals	
Aluminum	5,172	mg/kg
Antimony	0.44	mg/kg
Arsenic	26	mg/kg
Barium	12	mg/kg
Beryllium	0.11	mg/kg
Cadmium	20.6	mg/kg
Chromium	114	mg/kg
Copper	48	mg/kg
Iron	220,000	mg/kg
Lead	730	mg/kg
Mercury	2.76	mg/kg
Nickel	158	mg/kg
Selenium	6.11	mg/kg
Silver	360	mg/kg
Thallium	<1	mg/kg
Zinc	200	mg/kg

Signature



Eastex Industries, Inc.

P.A. DER 46005  
N.J. DEP 77371

Licensed Analytical Laboratories

28 S. Hanover Street  
125 Main Avenue

Pottstown, PA. 19464 215/327-0880 FAX 215/327-9608  
Elmwood Park, N.J. 07407 201/791-6700

P.O. # 654-J5763-E-38576  
Sample # 880321.006

Customer # oh mat  
For O. H. Materials Co.  
P.O. Box 41  
Windsor NJ 08561-0041  
Attn: John Leporati

Date Sampled 3-14-88 4:30 PM Date Rec. 3-21-88 10:10 AM  
Sampled By GD/RL Rec by SLG  
Sample grab PWS ID  
Sample ID Newark NJ US EPA Region II Proj. #5763E  
5 5763E-009 Dirt from 4th floor

	General	
Cyanide Total	2.50	mg/kg
	Metals	
Aluminum	6,720	mg/kg
Antimony	0.91	mg/kg
Arsenic	7.79	mg/kg
Barium	78	mg/kg
Beryllium	0.22	mg/kg
Cadmium	888	mg/kg
Chromium	122	mg/kg
Copper	2,120	mg/kg
Iron	392,000	mg/kg
Lead	1,176	mg/kg
Mercury	25.6	mg/kg
Nickel	386	mg/kg
Selenium	4.32	mg/kg
Silver	960	mg/kg
Thallium	<1	mg/kg
Zinc	5,060	mg/kg

Signature

*Charles J. Manna*

Wastex Industries, Inc.

P.A. DER 46005  
N.J. DEP 77371

Licensed Analytical Laboratories

28 S. Hanover Street  
125 Main Avenue

Pottstown, PA. 19464 215/327-0880 FAX 215/327-9608  
Elmwood Park, N.J. 07407 201/791-6700

P.O. # 654-J5763-E-3857  
Sample # 880321.002

AVIS

Customer # oh mat  
For O. H. Materials Co.  
P.O. Box 41  
Windsor NJ 08561-0041  
Attn: John Leporati

Date Sampled 3-14-88 11:30 AM Date Rec. 3-21-88 10:10 AM  
Sampled By BD/RL Rec by SLG  
Sample grab PWS ID  
Sample ID Newark NJ US EPA Region II Proj. #5763E  
1 5763E-002 Blue/clear flakes of spent film

Cyanide Total	General	1.78	mg/kg
Silver	Metals	112	mg/kg

Signature

*Charles A. Manna*

**REFERENCE NO. 14**



Suite 201, 1090 King Georges Post Road,  
Edison, NJ 08837 • (201) 225-6116

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION  
EPA CONTRACT 68-01-7367

TAT-02-F-04279

MEMORANDUM

TO: John Shaw  
Response and Prevention Branch, U.S. EPA

FROM: Michael Mentzel, TAT II PM <sup>MM</sup>  
Anibal Diaz, TAT II QC <sup>AD</sup>

SUBJECT: Soil Sampling Program Analytical Results  
IMS  
Newark, New Jersey

DATE: December 14, 1987

Attached please find a copy of analytical data generated for four composite soil samples collected at the IMS site on October 28, 1987. Sample collection followed the attached sample plan (see Appendix A). Composite samples collected were given the following lab numbers:

Area 1	091316
Area 2	091317
Area 3	091318
Area 4	091319

The sample locations are given under Figure #1 in the Soil Sampling Plan.

All analysis and quality assurance procedures were completed by the EPA Edison Laboratory. Also requested in this sampling program were PCB and pesticide analysis. Those results have not been finalized by the EPA Laboratory and will be provided under separate cover.

Heavy metals, cyanide and EP toxicity data are reported and compared to existing reference sources. Table 1 lists metals and cyanide results which exceeded the NJDEP guidelines established for use in ECRA cleanup projects.

Table 2 lists metals results which exceeded levels generally considered background conditions for the eastern United States (ASTDR, McClanahan 1984).

TABLE 1

METALS ABOVE NJDEP GUIDELINES (PPM)

<u>COMPOUND</u>	<u>NJDEP GUIDELINE</u>	<u>SAMPLE LOCATION</u>	<u>REPORTED RESULTS</u>
Lead	100	Area 1	272
		Area 2	200
		Area 3	570
		Area 4	190
Chromium	100	Area 1	280
		Area 2	99
		Area 3	140
Copper	170	Area 3	990*
Mercury	1	Area 3	2.6
		Area 4	5.4
Zinc	350	Area 1	500*
		Area 2	370*
		Area 3	680*

TABLE 2

METALS ABOVE AMBIENT CONDITIONS (PPM)

<u>COMPOUND</u>	<u>AMBIENT BACKGROUND</u>	<u>SAMPLE LOCATION</u>	<u>REPORTED RESULTS</u>
Copper	100	Area 1	990*
Mercury	4.6	Area 4	5.4
Beryllium	0.6	Area 1	67
		Area 2	51
		Area 3	56
		Area 4	21

\*Laboratory Estimated Value

APPENDIX A  
SOIL SAMPLING PLAN



Suite 201, 1090 King Georges Post Road,  
Edison, NJ 08837 • (201) 225-6266

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION  
EPA CONTRACT 68-01-7367

TAT-02-F-04162

MEMORANDUM

TO: John Shaw  
Response and Prevention Branch, U.S. EPA

FROM: Michael Mentzel TAT II <sup>MM</sup>  
Therese Perrette TAT II <sup>TF</sup>

SUBJECT: Soil Sampling Program  
IMS  
Newark, New Jersey

DATE: October 26, 1987

Attached please find the report concerning the sampling program  
for the soil surrounding the building IMS site.

Attachment

INTERNATIONAL METALLURGICAL  
SERVICES  
SOIL SAMPLING PLAN

Michael Mentzel  
USEPA Technical Assistance Team  
October 23, 1987

1. PROJECT NAME: IMS Soil Sampling  
Newark, New Jersey
2. PROJECT REQUESTED BY: John Shaw  
Response and Prevention Branch  
U.S. EPA
3. DATE REQUESTED: October 22, 1987
4. DATE OF PROJECT INITIATION: October 28, 1987
5. PROJECT OFFICER: Michael Mentzel, TAT II
6. QUALITY ASSURANCE OFFICER: Therese Perrette. TAT II
7. PROJECT DESCRIPTION:

A. Objective and Scope:

The objective of this sampling program is to determine if soil surrounding the IMS building is contaminated with heavy metals, PCB's or other suspected compounds which would prevent use of the property for the clean up command post and equipment storage.

B. Data Usage:

Data obtained from the sampling and analysis of the wastes will be used as specified in 7.A.

C. Parameter Table:

<u>Parameter</u>	<u>Number of Samples<sup>1</sup></u>	<u>Sample Matrix<sup>2</sup></u>	<u>Analy- tical Mtd. Ref.</u>	<u>Sample Preser- vation<sup>3</sup></u>	<u>Holding Time<sup>3</sup></u>	<u>Sample Size</u>
PCB/PEST	4	Soil	SW 846 8080	Cool 4°C	14 Days	100 g
EP Toxicity	4	Soil	EPA Test Methods SW-846 2nd Ed.	Cool 4°C	N/A	100 g
Heavy Metals + Gold	4	Soil	SW 846	Cool 4°C	6 mos.	200 g
Cyanide	4	Soil	SW 846 9010	Cool 4°C	N/A	200 g

8. PROJECT FISCAL INFORMATION:

Sampling and manpower shall be provided by Technical Assistance Team.

9. PROJECT ORGANIZATION AND RESPONSIBILITY:

The following is a list of key project personnel and their corresponding responsibilities:

John Shaw, U.S. EPA	Project Director/ Sampling Operation
John Witkowski, U.S. EPA	Project Over Sight
Michael Mentzel, TAT II	Sampling Operation
Barbara Jakub, TAT II	Sample Assistance
Therese Perrette, TAT II	Project Audit and Quality Control
Therese Perrette, TAT II	Sampling Operation/ Documentation

10. DATA QUALITY REQUIREMENTS AND ASSESSMENTS:

<u>Parameter</u>	<u>Sample Matrix</u>	<u>Det. Lmt.</u>	<u>Est. Acc.</u>	<u>Acc. Prot.</u>	<u>Est. Precision</u>	<u>Prec. Prot.</u>
EP Toxicity	Solid	MDL <sup>1</sup>	Meth- od Depen- dent	Lab <sup>2</sup> QA/QC Guide- lines Will Be Re- viewed Prior to Sam- ple Analy- sis	RPD <sup>3</sup>	Dupli- cate of Every 20th Sample. QA/QC Depen- dent

<u>Parameter</u>	<u>Sample Matrix</u>	<u>Det. Lmt.</u>	<u>Est. Acc.</u>	<u>Acc. Prot.</u>	<u>Est. Precision</u>	<u>Prec. Prot.</u>
PCB's/ Pesticides	Solid	MDL	20- 150%	14.2 14.3	RPD	Duplicate of Every 20th Sample
Heavy Metals	Solid	MDL		14.3 14.4 14.5		

<sup>1</sup>Method Detection Limit

<sup>2</sup>QA/QC for RCRA and Compatibility are subject to chosen laboratories' specifications. Chosen laboratories' QA/QC package will be reviewed prior to analysis.

<sup>3</sup>Relative percent difference not to be greater than 30%.

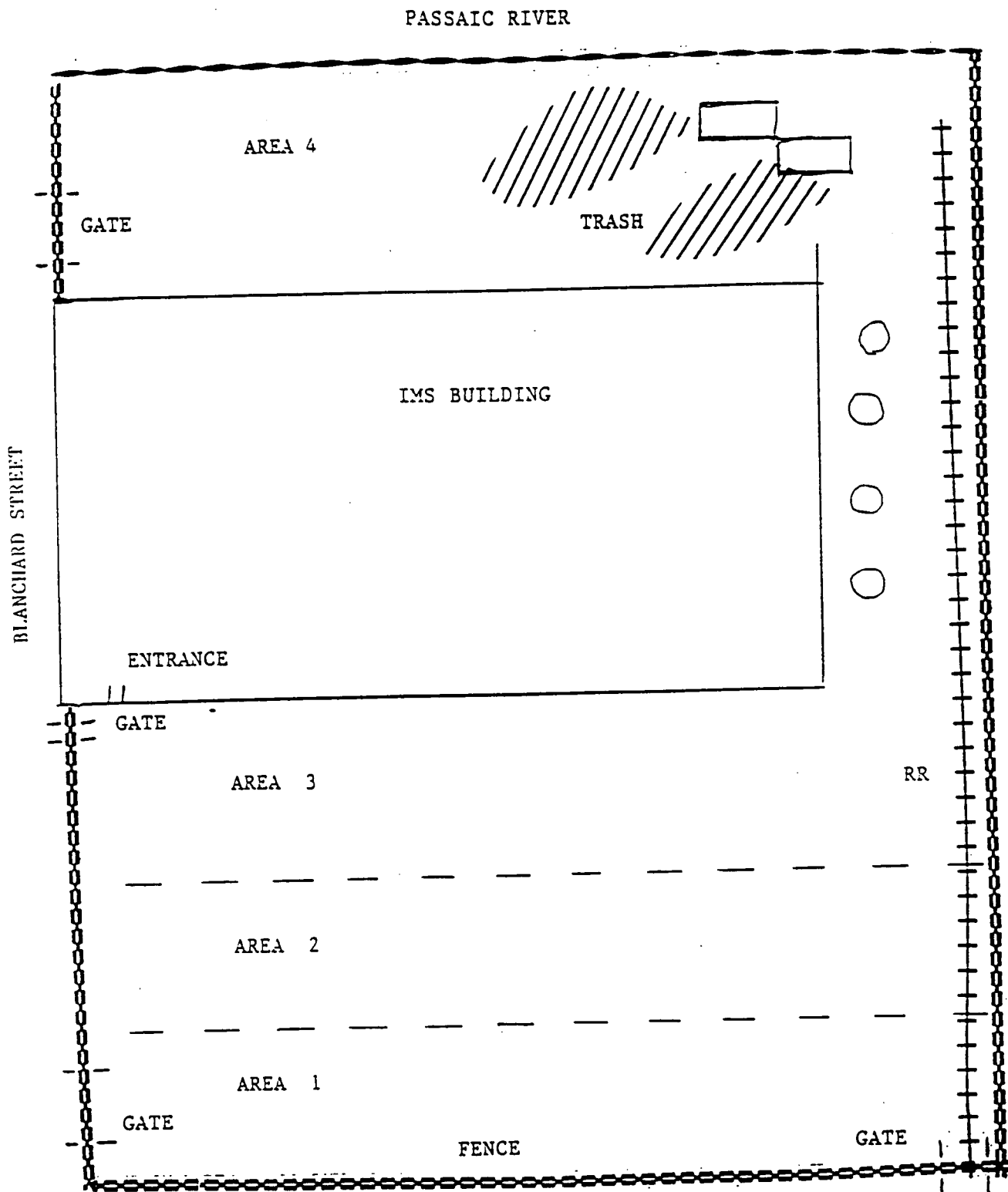
#### 11. SAMPLING PROCEDURE:

One composite sample will be taken at each of the four areas designated in Figure 1. The composite sample will consist of soil scooped up with a stainless steel trowel at three locations to a depth of 2 inches. The soil obtained will be thoroughly mixed to form a homogenous sample. Samples will be placed in one quart jars supplied by the EPA sample management office.

All sampling efforts will take place in level 'C' protection in order to eliminate potential exposure to harmful substances during the time soil is being disturbed. One blank sample consisting of distilled water will be supplied with the samples taken.

One sample will be taken by scooping twice the quantity soil needed, mixing to homogeneity and splitting into two separate jars. These will be submitted for matrix spike duplicate.

All sample jars will be wiped with paper towels and placed in ziploc bags. These will then be placed in a cooler for transport to the chosen laboratory following DOT regulations. Individual field data sheets will be completed for each composite sample listing location of each sample point and other pertinent information. Sample points will be marked with wooden stakes.



**WESTON**

SPILL PREVENTION &  
EMERGENCY RESPONSE DIVISION

EPA PM  
JOHN SHAW

FIGURE 1

In Association with ICF Technology Inc., C.C. Johnson & Associates, Inc., Resource Applications, Inc., Geo/Resource Consultants, Inc., and Environmental Toxicology International, Inc.

TAT PM  
MICHAEL MENTZEL

SAMPLE LOCATIONS

## 12. SAMPLE CUSTODY PROCEDURES:

EPA Chain-of-Custody will be filled out and maintained throughout entire site activities as per TAT SOP on sample handling, Sampling Container Contract specifications, and EPA Laboratories SOP. The Chain-of-Custody form to be used lists the following information:

- i. Sample number.
- ii. Number of sample containers.
- iii. Description of samples including specific location of sample collection.
- iv. Identity of person collecting the sample.
- v. Date and time of sample collection.
- vi. Date and time of custody transfer to laboratory (if the sample was collected by a person other than laboratory personnel).
- vii. Identity of person accepting custody (if the sample was collected by a person other than laboratory personnel).
- viii. Identity of the laboratory performing the analysis.

## 13. DOCUMENTATION, DATA REDUCTION AND REPORTING:

Documentation: Field data will be entered into a bound notebook. Field notebooks, Chain-of-Custody forms, and laboratory analysis reports will be filed and stored per the TAT Document Control System.

## 14. QUALITY ASSURANCE AND DATA REPORTING:

QA/QC to be furnished by the contracted laboratory in performance of the analysis will consist, at a minimum, of the following measures to ensure accurate data:

1. One set of field blanks consisting of organic free water will be shipped unopened to the laboratory. This blank is to be analyzed in order to ensure that no contamination has occurred.

2. At least 1 surrogate compound is to be used for the samples collected for PCB's/Pesticides analysis\*.

Results will be documented and submitted in the written report.

3. Matrix spike and matrix spike duplicate analysis will be performed on one sample. Results will be documented and submitted in the written report.

4. Prior to metals and cyanide analysis, a linearity calibration curve is to be constructed by analyzing standards spanning the anticipated range of samples to be analyzed.\*
5. Standard calibration curves for metals and cyanide analysis shall consist of a minimum of a reagent blank and four standards for each element to be analyzed.\*
6. The contracted laboratory will also furnish the following additional information as warranted:

\*As required.

\*\*For recovery ranges see Section 10.

- a) Copies of all spectral data obtained during performance of analysis. Copies should be signed by the analyst and checked by the Laboratory Manager.
- b) Data System Printout
  - Quantitation report or legible facsimile
- c) Manual work sheets.
- d) Identification and explanation of any analytical modifications used that differ from U.S. EPA protocol.

Project and Quality Assurance Officers will be responsible for accurate reporting of data emanating from the sampling report.

#### 15. DATA VALIDATION:

All steps of data generation and handling will be evaluated by the On-Scene Coordinator, the Project Officer and the Quality Assurance Officer for compliance with EPA Region II SOP for validating hazardous waste site data.

#### 16. SYSTEM AUDIT:

The QA/QC Officer will observe the sampling operations and review subsequent analytical data to assure that the QA/QC project plan has been adhered to.

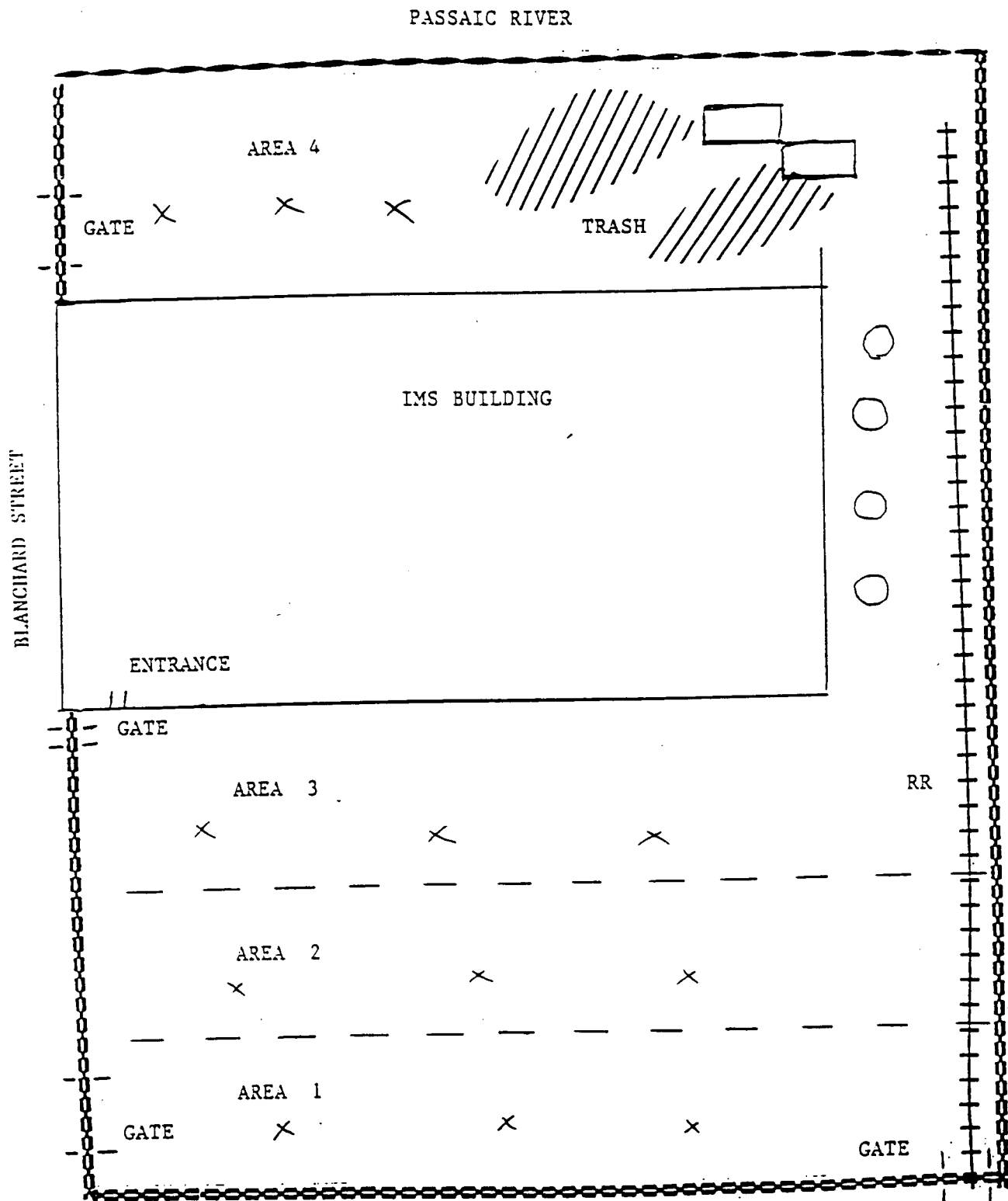
#### 17. CORRECTIVE ACTION:

All provisions in the field and laboratory will be taken to ensure that any problems that may develop will be dealt with as

quickly as possible to ensure the continuity of the sampling program. Any deviations from this sampling plan will be noted in the final report.

18. REPORTS:

Draft reports will be issued 14 days after receipt of laboratory results. Final reports will be issued 7 days after return of draft report by the EPA's Project Manager.



SPILL PREVENTION &  
EMERGENCY RESPONSE DIVISION

EPA PM  
JOHN SHAW

FIGURE 1

In Association with ICF Technology Inc., C.C. Johnson & Associates, Inc., Resource Applications, Inc., Geo/Resource Consultants, Inc., and Environmental Toxicology International, Inc.

TAT PM  
MICHAEL MENTZEL

SAMPLE LOCATIONS

APPENDIX B

LABORATORY ANALYTICAL DATA PACKAGE



Region II  
300 McGaw Drive - 2nd Floor, Raritan Center  
Edison, NJ 08837 • (201) 225-6116

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION  
EPA CONTRACT 68-01-6669

TRANSMITTAL MEMO

TO: John Show  
Response and Prevention Branch, U.S. EPA

FROM: Anibal Diaz  
TAT Region II

SUBJECT: Documentation of Transmittal

DATE: December 9, 1987

The purpose of this memo is to transmit the following information:

SITE: I M S

SUBJECT: Copy of Data Package for  
4 Soils collected 10/28/87  
Analysis for metals.

cc: TAT PM Mentall  
TAT FILE 8710-41

All EP toxicity results for the metals fall below 0.5 mg/l. These results are below federal standards set in 40 CFR 261.24. Also, all metals scans, except for lead in area 3, indicate contamination in concentrations less than the California list.

The analytical results have been included as Appendix B and are presented in the following format:

- a) Metals data are listed first for each location and are reported in milligrams per kilogram (mg/kg) which is equivalent to parts per million (ppm).
- b) EP toxicity results are listed directly below the metals data. The parameter number (PARNO) begins with 999. These are reported in milligrams per liter (mg/l) which are also equivalent to ppm.
- c) Antimony and thallium were not detected in any of the samples.
- d) The presence of cyanide was verified, but not quantified, due to low concentrations near the instrument detection limit.

REPORT DATE: 07/12/07

COMPLETED ANALYSIS REPORT

PROJECT NAME: TMS NEWARK

EST NO: 279

EXPLANATIONS OF REMARK CODES

REMARK CODE	EXPLANATION
R	RESULTS BASED UPON COLONY COUNTS OUTSIDE ACCEPTABLE RANGE
J	ESTIMATED VALUE
K	ACTUAL VALUE KNOWN TO BE LESS THAN VALUE GIVEN
L	ACTUAL VALUE KNOWN TO BE GREATER THAN VALUE GIVEN
V	PRESENCE OF MATERIAL VERIFIED BUT NOT QUANTIFIED
T	SAMPLED BUT NOT ANALYZED DUE TO LAB ACCIDENT
Y	REPORTED VALUE LESS THAN CRITERIA OF DETECTION
U	MATERIAL ANALYZED FOR, BUT NOT DETECTED

LOCATION CODES FOR IDENTIFICATION OF SAMPLING POINTS AT INDUSTRIAL /  
SANITARY FACILITIES, LANDFILLS, HAZARDOUS WASTE SITES.

CODE NUMBERS	SAMPLING POINTS
1001 - 1050	EFFLUENT PIPE NUMBER 001 TO 050
1051 - 1099	OTHER EFFLUENTS SUCH AS COOLING TOWER DISCHARGE, DISCHARGE FROM HOLDING PONDS, ETC.
1100 - 1249	IN PLANT SAMPLES - DURING PROCESS
1250 - 1274	IN PLANT SAMPLES AFTER PROCESS AND BEFORE TREATMENT OR DISCHARGE
1275 - 1424	IN PLANT SAMPLES - DURING TREATMENT
1425 - 1454	SEPARATE INFLUENT POINTS/WATER SOURCES
1455	INFLUENT ASSOCIATED WITH EFFLUENT 10XX
2000	BLANK FOR VOLATILE ORGANICS
2XXX	AUTO SAMPLER BLANK AT SAMPLE POSITION 1XXX
3000 - 3099	GROUND WATER FROM WELL #1 TO 99
3100 - 3199	SEDIMENT SAMPLE (WATER BOTTOM)
3200 - 3299	SOIL SAMPLE
3300 - 3399	STREAM WATER SAMPLE
3400 - 3499	LAGOON SAMPLE
3500 - 3599	STORAGE TANK SAMPLE
3600 - 3699	LEACHATE SAMPLE
3700 - 3799	OTHER TYPE SAMPLE

RECEIVED  
DEC 09 1987  
S & M BRANCH

## COMPLETED ANALYSIS REPORT

REPORT DATE: 87/12/07

PROJECT NAME: INS NEWARK

OBJECT NO: 279

DATE FROM TO	TIME OF DAY	LABNO	PARNO	PARAMETER NAME	UNITS	CHEMISTRY	VALUE & REMARK
87/10/30	1000						
CODE: 3700 SUBSTRATE: SOIL							
COMPOSITE SOIL SAMPLE TO 2" DEPTH							
TAKEN F/3 POINTS IN AREA 1							
		001310	00721	CADMIUM	S	MG/KG	SEDIMENT 0.5 M
			01078	SILVER	S	MG/KG	SEDIMENT 15
			01003	ARSENIC	S	MG/KG	SEDIMENT 4.0
			01013	BERYLLIUM	S	MG/KG	SEDIMENT 67
			01020	CHROMIUM	S	MG/KG	SEDIMENT 1
			01029	CHROMIUM	S	MG/KG	SEDIMENT 280
			01043	COPPER	S	MG/KG	SEDIMENT 110
			71921	MERCURY	S	MG/KG	SEDIMENT .63
			01052	LEAD	S	MG/KG	SEDIMENT 272
			01068	NICKEL	S	MG/KG	SEDIMENT 47
			01090	ANTIMONY	S	MG/KG	SEDIMENT .1
			01148	SELENIUM	S	MG/KG	SEDIMENT .7
			34480	THALLIUM	S	MG/KG	SEDIMENT .1
			01093	ZINC	S	MG/KG	SEDIMENT 900
			99901	ARSENIC	M	MG/L	TOTAL .006
			99902	BARIUM	M	MG/L	TOTAL .31
			99903	CADMIUM	M	MG/L	TOTAL .02
			99904	CHROMIUM	M	MG/L	TOTAL .35
			99905	LEAD	M	MG/L	TOTAL .03
			99906	MERCURY	M	MG/L	TOTAL .007
			99907	SELENIUM	M	MG/L	TOTAL .002
			99908	SILVER	M	MG/L	TOTAL .04

87/10/30 1020  
 CODE: 3700 SUBSTRATE: SOIL  
 COMPOSITE SOIL SAMPLE TO 2" DEPTH  
 TAKEN F/3 POINTS IN AREA 2

001317	00731	CADMIUM	S	MG/KG	SEDIMENT	0.04	M
	01078	SILVER	S	MG/KG	SEDIMENT	27	
	01003	ARSENIC	S	MG/KG	SEDIMENT	3.4	
	01013	BERYLLIUM	S	MG/KG	SEDIMENT	51	
	01020	CHROMIUM	S	MG/KG	SEDIMENT	2	
	01029	CHROMIUM	S	MG/KG	SEDIMENT	99	
	01043	COPPER	S	MG/KG	SEDIMENT	110	
	71921	MERCURY	S	MG/KG	SEDIMENT	.62	
	01052	LEAD	S	MG/KG	SEDIMENT	200	
	01068	NICKEL	S	MG/KG	SEDIMENT	30	
	01090	ANTIMONY	S	MG/KG	SEDIMENT	.1	
	01148	SELENIUM	S	MG/KG	SEDIMENT	.2	
	34480	THALLIUM	S	MG/KG	SEDIMENT	.1	
	01093	ZINC	S	MG/KG	SEDIMENT	370	J

COMPLETED ANALYSIS REPORT

REPORT DATE: 87/12/0

PROJECT NAME: INS NEWARK

## COMPLETED ANALYSIS REPORT

REPORT DATE: 07/12/07

PROJECT NO: 279

PROJECT NAME: IMS NEWARK

DATE FROM TO	TIME OF DAY	LAB NO	PARAM NO	PARAMETER NAME	UNITS	CHEMISTRY	VALUE & REMARK
			001317	00001 ARSENIC	M	MG/L	TOTAL .000 M
				00002 BARIUM	M	MG/L	TOTAL .22
				00003 CADMIUM	M	MG/L	TOTAL .02 U
				00004 CHROMIUM	M	MG/L	TOTAL .35 U
				00005 LEAD	M	MG/L	TOTAL .03 U
				00006 MERCURY	M	MG/L	TOTAL .005 M
				00007 SELENIUM	M	MG/L	TOTAL .007
				00008 SILVER	M	MG/L	TOTAL .34 U

07/10/20 1130

CODE: 3700 SUBSTRATE SOIL  
 COMPOSITE SOIL SAMPLE TO 2" DEPTH  
 TAKEN F/3 POINTS IN AREA 3

001318	00701	CYANIDE	S	MG/KG	SEDIMENT	0.43	U
	01078	SILVER	S	MG/KG	SEDIMENT	35	
	01003	ARSENIC	S	MG/KG	SEDIMENT	16	
	01013	BERYLLIUM	S	MG/KG	SEDIMENT	56	
	01010	CADMIUM	S	MG/KG	SEDIMENT	2.7	
	01029	CHROMIUM	S	MG/KG	SEDIMENT	140	
	01043	COPPER	S	MG/KG	SEDIMENT	990	J
	71021	MERCURY	S	MG/KG	SEDIMENT	2.6	
	01072	LEAD	S	MG/KG	SEDIMENT	970	
	01068	NICKEL	S	MG/KG	SEDIMENT	43	
	01070	ANTIMONY	S	MG/KG	SEDIMENT	.1	U
	01076	SELENIUM	S	MG/KG	SEDIMENT	.3	M
	01070	THALLIUM	S	MG/KG	SEDIMENT	.1	U
	01003	ZINC	S	MG/KG	SEDIMENT	680	J
	00001	ARSENIC	M	MG/L	TOTAL	.000	M
	00002	BARIUM	M	MG/L	TOTAL	.43	
	00003	CADMIUM	M	MG/L	TOTAL	.02	U
	00004	CHROMIUM	M	MG/L	TOTAL	.05	U
	00005	LEAD	M	MG/L	TOTAL	.03	U
	00006	MERCURY	M	MG/L	TOTAL	.0002	U
	00007	SELENIUM	M	MG/L	TOTAL	.001	M
	00008	SILVER	M	MG/L	TOTAL	.04	U

07/10/20 1135

CODE: 3700 SUBSTRATE SOIL  
 COMPOSITE SOIL SAMPLE TO 2" DEPTH  
 TAKEN F/3 POINTS IN AREA 4

001319	00721	CYANIDE	S	MG/KG	SEDIMENT	0.74	M
--------	-------	---------	---	-------	----------	------	---

## COMPLETED ANALYSIS REPORT

REPORT DATE: 07/12/07

## COMPLETED ANALYSIS REPORT

REPORT DATE: 07/12/07

PROJECT NAME: INE NEWARK

JOB NO: 279

DATE FROM TO	TIME OF DAY	LAB NO	PARAM	PARAMETER NAME	UNITS	CHEMISTRY	VALUE & REMARK
		001313	01070	SILVER	S	MG/KG SEDIMENT	11
			01003	ARSENIC	S	MG/KG SEDIMENT	2.1
			01013	BERYLLIUM	S	MG/KG SEDIMENT	21
			01028	CADMIUM	S	MG/KG SEDIMENT	2.2
			01029	CHROMIUM	S	MG/KG SEDIMENT	21
			01043	COPPER	S	MG/KG SEDIMENT	69
			01052	LEAD	S	MG/KG SEDIMENT	190
			01056	MERCUY	S	MG/KG SEDIMENT	1.4
			01058	NICKEL	S	MG/KG SEDIMENT	.1 U
			01098	ANTIMONY	S	MG/KG SEDIMENT	.3 U
			01140	SELENIUM	S	MG/KG SEDIMENT	.1 U
			01680	THALLIUM	S	MG/KG SEDIMENT	300 J
			01093	ZINC	S	MG/KG SEDIMENT	.019
			99901	ARSENIC	M	MG/L TOTAL	.63
			99902	BARIUM	M	MG/L TOTAL	.02 U
			99903	CADMIUM	M	MG/L TOTAL	.09 J
			99904	CHROMIUM	M	MG/L TOTAL	.03 U
			99906	LEAD	M	MG/L TOTAL	.0002 U
			99908	MERCUY	M	MG/L TOTAL	.001 U
			99907	SELENIUM	M	MG/L TOTAL	.001 U
			99900	SILVER	M	MG/L TOTAL	.001 U

\*\*\*\*\* END OF PROJECT \*\*\*\*\*

T. T. T.

END	JOB 1891	INMRPT1	FINAL REPORT	ACCT: L042	4.58.23 PM	07 DEC 97	INTROR	P216.P01	LMP3	GIN	MIN4
END	JOB 1891	INMRPT1	FINAL REPORT	ACCT: L042	4.58.23 PM	07 DEC 97	INTROR	P216.P01	LMP3	GIN	MIN4
END	JOB 1891	INMRPT1	FINAL REPORT	ACCT: L042	4.58.23 PM	07 DEC 97	INTROR	P216.P01	LMP3	GIN	MIN4

# FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey  
ENVIRONMENTAL SERVICES DIVISION

Project Name I.M.S.  
Collector(s) M.M./B.J. Affiliation TAT

## SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual  
Niskin Net Seine Trawl Bucket  
Trowel Cream Dipper  
Automatic  
Other \_\_\_\_\_

LDMS CODE \_\_\_\_\_

DATA BASE CODE \_\_\_\_\_

STA. TYPE CODE \_\_\_\_\_

## SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological  
Solvent Extract Other ( SOIL )

BOD - Seed Supplied ☐ Yes ☐ No Source: \_\_\_\_\_

## Sample Preparation (Circle)

### Container

Glass Jar  
Plastic Jar  
Metal  
POA Vial  
Cubitainer  
Acetate Core  
Paper Cap  
Teflon Cap  
Foil Cap  
Other \_\_\_\_\_

### Cleaning Procedure

Detergent Wash  
Water Rinse  
Acid Rinse  
Solvent Rinse:  
Acetone  
Hexane  
Methylene Chloride  
Other (Specify):

5MC  
prepared

### Preservation

Acid \_\_\_\_\_  
Solvent \_\_\_\_\_  
Chemical \_\_\_\_\_  
Wet Ice  
Dry Ice  
Ambient  
Other \_\_\_\_\_

## Sample Source Type (Circle)

Landfill	Industrial
Leachate	Effluent
Drum	Process Stream
Test Well	Holding Pond
Depth:	Drum
Other: _____	Waste Pile
	Municipal Treatment
Storage Tank	Influent
Top	Effluent-CI
Middle	Effluent-Non CI
Bottom	Sludge
Truck	Ambient
Drum	Lake
Tank	Stream
Other _____	Pond
	Ocean
Wells	Estuary
Monitoring	<u>soil</u>
Production	
Drinking	
Private	

Samples to:

Bact Bio Chem Other

Station No.

\_\_\_\_\_

Sample Depth (Ft.)/Fac. Loc. Code

\_\_\_\_\_

Lab Number

091319

Type of Sample

Grab Composite  
X Time Space

Collection (Ending) Date

Yr Mo Day  
8/7/10 218

Ending Time (24 Hr)

1135

Beginning Date

Yr Mo Day  
8/7/10 218

Beginning Time (24 Hr)

1120

pH

\_\_\_\_\_

Sample Temp. (°C)

\_\_\_\_\_

DO (mg/l)

\_\_\_\_\_

Cond. (uMHOS/CM)

\_\_\_\_\_

Salinity(‰)

\_\_\_\_\_

Sample Split

☐ Yes ☒ No

If Yes With Whom? \_\_\_\_\_

Receipt ☐ Yes ☐ No

Sample Location Description:

SOIL SAMPLE TAKEN TO  
A DEPTH OF ~ 2 INCHES  
SOME GRAVEL ON SURFACE.

Remarks:

Composite sample from 3 points in area #4  
(as shown in sampling plan)

SAMPLES TO 20 ULT X MIXED  
AND PLACED IN FOUR  
80Z JARS.

# FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

Project Name LMS  
Collector(s) MM/BJ Affiliation TAT

## SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual  
Niskin Net Seine Trawl Bucket  
Trowel Cream Dipper  
Automatic  
Other \_\_\_\_\_

LDMS CODE \_\_\_\_\_

DATA BASE CODE \_\_\_\_\_

STA. TYPE CODE \_\_\_\_\_

SUBSTRATE TYPE (Circle) Aqueous Sediment Sludge Oil Biological  
Solvent Extract Other ( SOIL )

BOD - Seed Supplied ☐ Yes ☐ No Source:

Sample Preparation (Circle)		Sample Source Type (Circle)	
Container	Cleaning Procedure	Landfill	Industrial
Glass Jar	Detergent Wash	Leachate	Effluent
Plastic Jar	Water Rinse	Drum	Process Stream
Metal	Acid Rinse	Test Well	Holding Pond
POA Vial	Solvent Rinse:	Depth:	Drum
Cubitainer	Acetone	Other:	Waste Pile
Acetate Core	Hexane		Municipal Treatment
Paper Cap	Methylene Chloride	Storage Tank	Influent
Teflon Cap	Other (Specify):	Top	Effluent-CI
Foil Cap	<u>SMO</u>	Middle	Effluent-Non CI
Other _____	<u>prepared</u>	Bottom	Sludge
		Truck	Ambient
		Drum	Lake
		Tank	Stream
		Other _____	Pond
			Ocean
		Wells	Estuary
		Monitoring	<u>soil</u>
		Production	
		Drinking	
		Private	

Samples to:

Bact	Bio	Chem	Other
------	-----	------	-------

Station No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample Depth (Ft.)/Fac. Loc. Code

--	--	--	--	--	--	--	--	--	--

Lab Number

091318

Type of Sample

Grab	<u>Composite</u>
<u>X</u>	Time Space

Collection (Ending) Date

Yr 87 Mo 10 Day 28

Ending Time (24 Hr)

1120

Beginning Date

Yr 87 Mo 10 Day 28

Beginning Time (24 Hr)

1100

pH

--	--	--	--	--	--

Sample Temp. (°C)

--	--	--	--	--	--

DO (mg/l)

--	--	--	--	--	--

Cond. (uMHOS/CM)

--	--	--	--	--	--	--	--

Salinity(‰)

--	--	--	--	--	--

Sample Split

☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Sample Location Description:

SAMPLE TAKEN A DEPTH OF  
~ 2 INCHES  
GRAVEL ON SURFACE

Remarks:

Composite sample taken from 3 points in  
Area #3 (as shown in sampling plan)  
SAMPLES THOROUGHLY MIXED AND  
PLACED IN FOUR 80Z JARS

# FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey  
ENVIRONMENTAL SERVICES DIVISION

Project Name IMS  
Collector(s) MM/B Affiliation TRAT

## SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual  
Niskin Net Seine Trawl Bucket  
Trawl Cream Dipper  
Automatic  
Other

LDMS CODE

DATA BASE CODE

STA. TYPE CODE

## SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological  
Solvent Extract Other ( SOIL )

BOD - Seed Supplied ☐ Yes ☐ No Source:

### Sample Preparation (Circle)

Container  
Glass Jar  
Plastic Jar  
Metal  
POA Vial  
Cubitainer  
Acetate Core  
Paper Cap  
Teflon Cap  
Foil Cap  
Other  
Preservation  
Acid  
Solvent  
Chemical  
Wet Ice  
Dry Ice  
Ambient  
Other

Cleaning Procedure  
Detergent Wash  
Water Rinse  
Acid Rinse  
Solvent Rinse:  
Acetone  
Hexane  
Methylene Chloride  
Other (Specify):

SMD prepared

### Sample Source Type (Circle)

Landfill Industrial  
Leachate Effluent  
Drum Process Stream  
Test Well Holding Pond  
Depth: Drum  
Other: Waste Pile  
Municipal Treatment  
Storage Tank Influent  
Top Effluent-CI  
Middle Effluent-Non CI  
Bottom Sludge  
Truck Ambient  
Drum Lake  
Tank Stream  
Other Pond  
Ocean  
Wells Estuary  
Monitoring SOIL  
Production  
Drinking  
Private

Samples to:

Bact Bio Chem Other

Station No.

Sample Depth (Ft.)/Fac. Loc. Code

Lab Number

091317

Type of Sample

Grab Composite  
Time Space

Collection (Ending) Date

8 Yr 10 Mo 28 Day

Ending Time (24 Hr)

1020

Beginning Date

8 Yr 10 Mo 28 Day

Beginning Time (24 Hr)

1020

pH

Sample Temp. (°C)

DO (mg/l)

Cond. (uMHOS/CM)

Salinity(‰)

Sample Split

☐ Yes ☒ No

If Yes With Whom?

Receipt ☐ Yes ☐ No

Sample Location Description:

SAMPLE TAKEN TO A  
DEPTH OF ~ 2 INCHES  
GRAVEL ON SURFACE

Remarks:

Composite sample taken from 3 points in dredge  
as shown in sampling plan  
5 SAMPLES THOROUGHLY MIXED + PLACED  
IN FOUR 8 OZ JARS

# FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edlson, New Jersey  
ENVIRONMENTAL SERVICES DIVISION

Project Name PLS  
Collector(s) MM EJ Affiliation TAT

## SAMPLING METHOD (Circle)

Kemmerer Dredge Ponar Manual  
Niskin Net Seine Trawl Bucket  
Trowel Cream Dipper  
Automatic  
Other \_\_\_\_\_

LDMS CODE \_\_\_\_\_

DATA BASE CODE \_\_\_\_\_

STA. TYPE CODE \_\_\_\_\_

## SUBSTRATE TYPE (Circle)

Aqueous Sediment Sludge Oil Biological  
Solvent Extract Other ( SC/L )

BOD - Seed Supplied ☐ Yes ☐ No Source: \_\_\_\_\_

### Sample Preparation (Circle)

### Sample Source Type (Circle)

Container  
Glass Jar  
Plastic Jar  
Metal  
POA Vial  
Cubitainer  
Acetate Core  
Paper Cap  
Teflon Cap  
Foil Cap  
Other \_\_\_\_\_

### Cleaning Procedure

Detergent Wash  
Water Rinse  
Acid Rinse  
Solvent Rinse:  
Acetone  
Hexane  
Methylene Chloride  
Other (Specify):  
SMC  
PREPARED

### Landfill

Leachate

Drum

Test Well

Depth: \_\_\_\_\_

Other: \_\_\_\_\_

### Storage Tank

Top

Middle

Bottom

Truck

Drum

Tank

Other: \_\_\_\_\_

### Wells

Monitoring

Production

Drinking

Private

### Industrial

Effluent

Process Stream

Holding Pond

Drum

Waste Pile

Municipal Treatment

### Influent

Effluent-CI

Effluent-Non CI

Sludge

Ambient

Lake

Stream

Pond

Ocean

Estuary

SOIL

## Sample Location Description:

1A 0850 hrs  
1B 0955 hrs  
1C 0960 hrs

SOIL SAMPLE TAKEN  
TO A DEPTH OF 2 INCHES  
MUCH GRAVEL WAS ON SURFACE

## Remarks:

COMPOSITE SAMPLE TAKEN  
FROM 3 POINTS IN AREA 1  
(AS SHOWN IN SAMPLING PLAN)  
THOROUGHLY MIXED & PLACED IN FOUR  
80Z JARS

## Samples to:

Bact Bio Chem Other

## Station No.

\_\_\_\_\_

## Sample Depth (Ft.)/Fac. Loc. Code

\_\_\_\_\_

## Lab Number

091316

## Type of Sample

Grab Composite  
Time Space

## Collection (Ending) Date

Yr Mo Day  
87 11 21

## Ending Time (24 Hr)

1000

## Beginning Date

Yr Mo Day  
87 11 21

## Beginning Time (24 Hr)

0950

## pH

\_\_\_\_\_

## Sample Temp. (°C)

\_\_\_\_\_

## DO (mg/l)

\_\_\_\_\_

## Cond. (uMHOS/CM)

\_\_\_\_\_

## Salinity (‰)

\_\_\_\_\_

## Sample Split

☐ Yes ☒ No

## If Yes With Whom?

Receipt ☐ Yes ☐ No

# CHAIN OF CUSTODY RECORD

ENVIRONMENTAL PROTECTION AGENCY — REGION II  
Environmental Services Division  
EDISON, NEW JERSEY 08817

Name of Unit and Address: **USEPA TECHNICAL ASSISTANCE TEAM (TAT)**  
**EPA-OSC**  
**JOHN SHAW**  
**1090 KING GEORGE POST RD EDISON NJ 2012256116**  
**IMS SITE CONTACT T. PERRETTE**

Sample Number	Number of Containers	Description of Samples
091316	4	SOIL 4 X 8oz GLASS JARS
091317	8	SOIL 4 X 8oz GLASS JARS
091318	4	SOIL 4 X 8oz GLASS JARS
091319	4	SOIL 4 X 8oz GLASS JARS

Person Assuming Responsibility for Sample: **MICHAEL MENTZEL (TAT)** *[Signature]* Time **1208** Date **1/28/83**

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
<b>ALL</b>	<i>[Signature]</i>				<b>DELIVERY TO LABORATORY</b>
Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody

**REFERENCE NO. 15**

# RECORD OF COMMUNICATION

☐ PHONE CALL    ☐ DISCUSSION    ☐ FIELD TRIP    ☐ CONFERENCE  
☐ OTHER (SPECIFY)

(Record of item checked above)

TO:

Leon Lazarus

FROM:

Gayatri Mehta

DATE

02/01/88

TIME

2:35p.m.

## SUBJECT

CLP Inorganic Data Packages for Quality Assurance Review

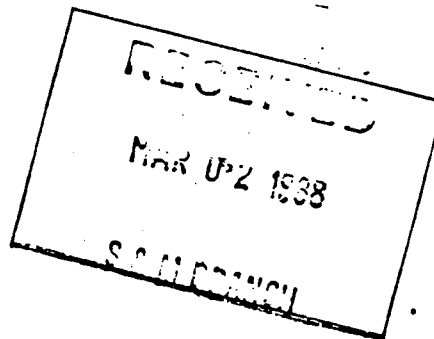
## SUMMARY OF COMMUNICATION

Attached are the following CLP Inorganic Data Packages to be reviewed for Quality Assurance:

SITE	CASE #/ SAS#	LABORATORY	ANALYSIS/ MATRIX	NUMBER OF SAMPLES	BLANK NUMBER(S)	DUPLICATE NUMBER(S)
CIC R3/RI/FS	8775	RMAL	Inorganics SOIL WATER	14 2	MBM 370(FB) MBM 371(FB)	NONE
IMS/TAT/ Emg. Response	8781	RMAL	Inorganics Soil Water	2 1	<del>NONE</del> FB MGL 583 F.M.	NONE

2-18-88

## CONCLUSIONS, ACTION TAKEN OR REQUIRED



## INFORMATION COPIES

TO:

File

25

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

**DW No.:** 7/87

EPA Sample No.

**MBL584**

MBL584D

**MBL584S**

**MBL585**

**Lab Sample ID.**

Were ICP interelement corrections applied?

Yes/No YES

Were ICP background corrections applied?

**Yes/No**     **YES**

If yes-were raw data generated before application of background corrections?

Yes/No NO

**Comments:**

**2 MEDIUM SOILS FOR TOTAL METALS AND CYANIDE ANALYSIS**

INTERFERENCE ON SERIAL DILUTION NOTED FOR CALCIUM AND POTASSIUM

**RMA OC#87569**

Release of the data contained in this hardcopy data package and in the computer readable data submitted on floppy/diskette have been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

**Lab Manager:**

**Date:** 01/24/88

RECEIVED

FEB 01 1988

S & M FRANCH

COVER PAGE - IN

7/87

U.S. EPA - CLP

00002

1  
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBL584

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476Lab Code: ENSECOCase No.: 8781SAS No.: 35510SDG No.: MBL584Matrix (soil/water): SOIL

Lab Sample ID: \_\_\_\_\_

Level (low/med): LOW ~~MEQ~~Date Recieved: 12/23/87Solids: 90.7Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5960	-	Y	P
7440-36-0	Antimony	6.8	U	N	P
7440-38-2	Arsenic	5.5	-	+	F
7440-39-3	Barium	172	-	-	P
7440-41-7	Beryllium	0.22	U	Y	P
7440-43-9	Cadmium	1.1	U	-	P
7440-70-2	Calcium	<del>8000</del>	-	EX	P
7440-47-3	Chromium	169	-	N	P
7440-48-4	Cobalt	12.3	-	-	P
7440-50-8	Copper	89.1	-	N	P
7439-89-6	Iron	17400	-	X	P
7439-92-1	Lead	232	-	N	P
7439-95-4	Magnesium	5890	-	X	P
7439-96-5	Manganese	<del>389</del>	-	N	P
7439-97-6	Mercury	0.3	-	-	CV
7440-02-0	Nickel	<del>40.8</del>	-	X	P
7440-09-7	Potassium	<del>520</del>	B	E	P
7482-49-2	Selenium	0.44	U	WN	F
7440-22-4	Silver	1.1	U	-	P
7440-23-5	Sodium	526	B	-	P
7440-28-0	Thallium	0.44	U	-	F
7440-62-2	Vanadium	<del>25.6</del>	-	N	P
7440-66-6	Zinc	314	-	N	P
	Cyanide	0.55	U	-	AS

Color Before: BROWN

Clarity Before: \_\_\_\_\_

Texture: COARSEColor After: BROWN

Clarity After: \_\_\_\_\_

Artifacts: \_\_\_\_\_

## Comments:

ARSENIC VALUE DETERMINED BY MSA

## U.S. EPA - CLP

00003

1  
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBL585

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476Lab Code: ENSECO Case No.: 8781 SAS No.: 3551B SDG No.: MBL584Matrix (soil/water): SOIL

Lab Sample ID: \_\_\_\_\_

Level (low/med): LOW *MACO*Date Recieved: 12/23/87Solids: 84.6 *514*Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6080	-	X	P
7440-36-0	Antimony	7.3	U	N J	P
7440-38-2	Arsenic	9.0	-	+	F
7440-39-3	Barium	371	-		P
7440-41-7	Beryllium	0.24	U	X	P
7440-43-9	Cadmium	7.3	-		P
7440-70-2	Calcium	<del>6260</del>	-	EY	P
7440-47-3	Chromium	248	-	N X J	P
7440-48-4	Cobalt	11.5	B		P
7440-50-8	Copper	171	-	N	P
7439-89-6	Iron	17300	-	X	P
7439-92-1	Lead	358	-	N J	P
7439-95-4	Magnesium	3810	-	X	P
7439-96-5	Manganese	<del>358</del>	-	N X	P
7439-97-6	Mercury	0.6	-		CV
7440-02-0	Nickel	<del>3875</del>	-	X	P
7440-09-7	Potassium	<del>489</del>	B	E	P
7482-49-2	Selenium	0.47	U	N X	F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	428	B		P
7440-28-0	Thallium	0.47	U		F
7440-62-2	Vanadium	<del>51.9</del>	-	N X	P
7440-66-6	Zinc	464	-	N X J	P
	Cyanide	6.3	-		AS

Color Before: BROWN

Clarity Before: \_\_\_\_\_

Texture: COARSEColor After: BROWN

Clarity After: \_\_\_\_\_

Artifacts: \_\_\_\_\_

## Comments:

ARSENIC VALUE DETERMINED BY MSA

IMS  
W

00001

**Contract: 68-01-7476**

SDG No.: MBL583

EPA Sample No.

**Lab Sample ID.**

MBL583  
MBL583D  
MBL583S

[illegible]

**RECEIVED**

JAN 26 1966

**Yes/No**     **YES**

**Yes/No**     **YES**

~~S & L Finance~~

Yes/No. NO

ONE LOW WATER FOR TOTAL METALS AND CYANIDE ANALYSIS

**RMA OC# 87570**

Release of the data contained in this hardcopy data package and in the computer readable data submitted on floppy diskette have been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

**Lab Manager:**

**Date:** 01/22/88

7/87

00002

U.S. EPA - CLP

1  
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBL583

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-7476Lab Code: ENSECO Case No.: 8781 SAS No.: 3551B SDG No.: MBL583Matrix (soil/water): WATER

Lab Sample ID: \_\_\_\_\_

Level (low/med): LOWDate Recieved: 12/23/87Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	43.0	B		P
7440-36-0	Antimony	31.0	U		P
7440-38-2	Arsenic	4.0	U		F
7440-39-3	Barium	3.9	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	257	B		P
7440-47-3	Chromium	5.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	10.3	B		P
7439-89-6	Iron	43.7	B		P
7439-92-1	Lead	5.0	N		F
7439-95-4	Magnesium	90.0	U		P
7439-96-5	Manganese	11.4	B		P
7439-97-6	Mercury	3.2	U		CV
7440-02-0	Nickel	7.0	U		P
7440-09-7	Potassium	111	U		P
7482-49-2	Selenium	2.0	U		F
7440-22-4	Silver	5.0	N		P
7440-23-5	Sodium	1500	U		P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	13.0	U		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS  
Color After: COLORLESSClarity Before: CLEAR  
Clarity After: CLEARTexture: \_\_\_\_\_  
Artifacts: \_\_\_\_\_

Comments:

SAMPLE IS A BLANK

## STANDARD OPERATING PROCEDURES

Date:  
Number:  
Revision:

0

## APPENDIX A - CHECK LIST AND REPORT FORM

Title: \_\_\_\_\_

A.1 This section must be completed by the Surveillance and Monitoring Section. \_\_\_\_\_

A.1.1 Project Name/Site: TMSA.1.2 Contract No. 68-01-7476 Case No. 8781A.1.3 Objective of Study (Specify data used) TATemg. response.A.1.4 Name of Analytical Laboratory 1: RNALA.1.4.1 Sample Matrix: Water ☒ 1 Soil/Sediment ☒ 2

Other (Describe) \_\_\_\_\_

A.1.4.2 Concentration Requested: Low ☒ Medium \_\_\_\_\_A.1.4.3 Sample Nos.: MBL 583 - 585

A.1.5 Name of Analytical Laboratory 2: \_\_\_\_\_

A.1.5.1 Sample Matrix: Water \_\_\_\_\_ Soil/Sediment \_\_\_\_\_

Other (Describe) \_\_\_\_\_

A.1.5.2 Concentration Requested: Low \_\_\_\_\_ Medium \_\_\_\_\_

A.1.5.3 Sample Nos.: \_\_\_\_\_

A.1.6 Name of Laboratory 3: \_\_\_\_\_

A.1.6.1 Sample Matrix: Water \_\_\_\_\_ Soil/Sediment \_\_\_\_\_

Other (Describe) \_\_\_\_\_

A.1.6.2 Concentration Requested: Low \_\_\_\_\_ Medium \_\_\_\_\_

A.1.6.3 Sample Nos.: \_\_\_\_\_

No dup  
old blank

LABORATORY: RNAL CASE NO. 8781 SOW NO. 7-87 SAMPLE TYPE: WATER

TEST STUDY DESCRIPTION: IMS / TAT Eng Resn SAMPLE NOS: M3L 583

FIELD BLANK SAMPLE NO. M3L 583 FIELD DUP. #'S: NONE LAB DUP. #'S: M3L 583

MATRIX SPIKE #'S: M3L 583 COMPLETION DATE: 2-29-88 REVIEWERS INITIALS: F.M.

Parameter	VII		III		VI		III			II			IV		V		VII IX		I		Meth
	UG/L		P B r l e a p n	Lab. Dup.	C RPD	Lim	Calibration Blanks			Calib. Ver. %R			ICP ITF Check		M S t p r i x k	LCS % R	Ser Dil	Field Blank			
	CRDL	IDL					Init	1	2	3	Init	1	2	3					Init.	Fin	
A1	200	20	20u	18	CRDL	20u	20u	20u		107	102	104		101	100	94	96	NR	(43)	P	
Sb	60	31	31u	NC	-	31u	31u	31u		92	95	94		NR	NR	88	88	NR	31u	P	
As	10	4	4u	NC	-	4u	4u	4u		94	93	95		NA	NA	83	97	NA	4u	F	
Ba	200	3	3u	14	CRDL	3u	3u	3u		102	95	92		97	92	90	89	RR	3.9	P	
Be	5	1	1u	NC	-	1u	1u	1u		102	94	95		99	95	92	95	NR	1u	P	
Cd	5	5	5u	NC	-	5u	5u	5u		105	98	97		105	106	94	94	NR	5u	P	
Ca	5000	92	92u	7.3	CRDL	92u	92u	92u		105	98	97		97	94	NR	93	NR	(257)	P	
Cr	10	5	5u	NC	-	5u	5u	5u		95	96	94		93	91	87	85	NR	5u	P	
Co	50	6	6u	NC	-	6u	6u	6u		109	97	96		103	98	95	97	NR	6u	P	
Cu	25	9	9u	7	CRDL	9u	9u	9u		102	98	97		98	96	94	95	NR	10.3	P	
Fe	100	31	31u	0.2	CRDL	31u	31u	31u		104	97	97		93	91	92	93	NR	43.7	P	
Pb	5	1	1u	53	CRDL	1u	1u	1u		100	101	104		NA	NA	(56)	92	NA	(5)	F	
Mg	5000	90	90u	NC	-	90u	90u	(101)		105	99	100		101	101	NR	92	NR	90u	P	
Mn	15	5	5u	29	CRDL	5u	5u	5u		105	96	94		107	102	94	92	NR	(11.4)	P	
Hg	0.2	0.1	0.2u	NC	-	0.2u	0.2u	0.2u		100	101	104		NA	NA	110	NR	NA	0.2u	Cv	
N1	40	7	7u	NC	-	7u	7u	7u		103	98	97		99	96	95	90	NR	7u	P	
K	5000	111	111u	NC	-	111u	111u	111u		106	101	101		NR	NR	NR	94	NR	111u	P	
Se	5	2	2u	NC	-	2u	2u	2u		103	106	104		NA	NA	91	98	NA	2u	F	
Ag	10	5	5u	NC	-	5u	5u	5u		100	95	95		97	99	(73)	89	NR	5u	P	
a	5000	1500	1500u	NC	-	1500u	1500u	1500u		106	100	101		NR	NR	NR	93	NR	1500u	P	
Tl	10	2	2u	NC	-	2u	2u	2u		106	101	105		NA	NA	88	97	NA	2u	F	
V	50	2	2u	NC	-	2u	2u	2u		100	97	96		99	97	89	88	NR	2u	P	
Zn	20	13	13u	NC	-	13u	13u	13u		100	98	96		97	96	95	90	NR	13u	P	

LABORATORY: RNAL CASE NO. 8781 SOW NO. 7-87 SAMPLE TYPE: SOIL

STUDY DESCRIPTION: INS/TAT Emg. Resp. SAMPLE NOS: MBL 584 585

LD BLANK SAMPLE NO. MBL 583 FIELD DUP. #'S: NONE LAB DUP. #'S: MBL 584

MATRIX SPIKE #'S: MBL 584 COMPLETION DATE: 2-29-88 REVIEWERS INITIALS: F.M.

	VII	III	VI	III	II	IV	V	VII	IX	I	
Parameter	UG/L	P B r 1 e a p n	Lab. Dup.	Calibration Blanks	Calib. Ver. %R	ICP ITF Check	M S t i p r 1 % R x k	LCS	Ser Dil	Field Blank	M e t h
	CPDL	IDL	RPD	C Lim	Init 1 2 3	Init 1 2 3	Init. Fin				
Al	200	20	4u (42)	20% 20u 20u 20u	107 102 104	101 100	NR	88	4.3	(43)	P
Sb	60	31	6.2u NC	- 3u 3u 3u	92 94 92 97	NR NR	(45)	105	NR	31u	P
As	10	4	0.8u 20	CAOL 4u 4u 4u 4u	99 103 103	NA NA	101	(71)	NA	4u	F
Ba	200	3	0.87 8.4	CAOL 3u 3u 3u	102 95 94	97 92	79	(31)	6.4	3.9	P
Be	5	1	0.2u NC	- 1u 1u 1u	102 95 94	99 95	96	95	NR	1u	P
Cd	5	5	1u NC	- 5u 5u 5u	105 97 98	105 106	106	96	NR	5u	P
Ca	5000	92	18.4u (106)	20% 92u 92u 92u	105 98 97	97 94	NR	94	(11)	(257)	P
Cr	10	5	1.4 (62)	20% 5u 5u 5u	95 96 96	93 91	(132)	91	4.8	5u	P
Co	50	6	1.2u 47	CAOL 6u 6u 6u	109 97 97	103 98	94	99	NR	6u	P
Cu	25	9	2.2 13	20% 9u 9u 9u	102 98 97	98 96	(67)	97	2.3	10.3	P
Fe	100	31	6.2u (23)	20% 31u 31u 31u	104 98 99	93 91	NR	99	5.1	43.7	P
Pb	5	(28)	5.6u 6.7	20% 28u 28u 28u	94 96 97	93 90	(32)	89	4.6		P
Mg	5000	90	18u (61)	20% 90u 90u 90u	105 99 98	101 101	NR	99	5.6	90u	P
Mn	15	5	1u (176)	20% 5u 5u 5u	105 96 96	107 102	(27)	100	5.3	(11.4)	P
Hg	0.2	0.1	0.1u 0	20% 0.2u 0.2u 0.2u	104 100 110	NA NA	100	102	NA	0.2u	CV
Ni	40	7	1.4u (55)	CAOL 7u 7u 7u	103 99 98	99 96	82	96	8.6	7u	P
K	5000	111	(57) 6.5	CAOL 111u (321) 111u	106 101 100	NR NR	NR	(246)	(58)	111u	P
Se	5	2	0.4u NC	- 2u 2u 2u 2u	107 103 103 105	NA NA	(59)	101	NA	2u	F
Ag	10	5	1u NC	- 5u 5u 5u	100 94 94	97 99	80	93	NR	5u	P
	5000	1500	300u 22	CAOL 1500u 1500u 1500u	106 100 99	NR NR	NR	(192)	NR	1500u	P
Tl	10	2	0.4u NC	- 2u 2u 2u 2u	106 103 104 101	NA NA	92	86	NA	2u	F
V	50	2	0.4u (65)	CAOL 2u 2u 2u	99 97 96	99 97	(55)	97	3.6	2u	P
	20	13	2.6u (27)	20% 13u 13u 13u	100 97 100	97 96	(16)	90	7.7	13u	P

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Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

Contractor Preparer \_\_\_\_\_

Completion Date 2-29-88

NOTE: All "action" requirements apply to data preparer, unless specifically stated otherwise.

A.1.1 Contract Compliance Screening Report (CCS) - Present?

YES NO N/A

\_\_\_\_ ☒ \_\_\_\_

A.1.2 Record of Communication (from RSCC) - Present?

☒ \_\_\_\_ \_\_\_\_

Action: If no, request from RSCC.

A.1.3 Sample Traffic Report - Present or on file?

☒ \_\_\_\_ \_\_\_\_

Action: If no, request from Regional Sample Control Center (RSCC).

A.1.4 Cover Page - Present?

☒ \_\_\_\_ \_\_\_\_

ACTION: If no, prepare Telephone Record Log, and contact laboratory.

Do numbers of sample correspond to numbers on Record of Communication?

☒ \_\_\_\_ \_\_\_\_

Do sample numbers on cover page agree with sample numbers on:

a. Traffic Report Sheet?

☒ \_\_\_\_ \_\_\_\_

b. Form I's?

☒ \_\_\_\_ \_\_\_\_

c. Surveillance and Monitoring Branch Review

☒ \_\_\_\_ \_\_\_\_

ACTION: If no for any of the above, contact RSCC for clarification.

A.1.5 Form I (Data Reporting) - All present and complete?

☒ \_\_\_\_ \_\_\_\_

ACTION: If no, prepare telephone record log and contact laboratory.

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Title: Appendix A.1: Data Assessment - Contract  
 Compliance (Significant Element Review)

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
A.1.6 <u>Holding Times (Aqueous Samples Only)</u> (Examine Sample Traffic Reports and Form X)			
Mercury <sup>26</sup> (28 days) - Exceeded? <small>From sampling to digestion.</small>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cyanide (14 days) - Exceeded?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other metals (6 months) - Exceeded?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Conventionals (Use 40 CFR 136 criteria) - Exceeded?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Which Parameters? _____			

CONTRACTOR ACTION: Prepare a list of all samples and analytes for which holding times have been exceeded. Specify the number of days from date of collection (see traffic report) to the date of analysis (from raw data). Attach to checklist.

MPB ACTION: If yes, reject (red-line) values less than Instrument Detection Limit (IDL). Flag as estimated (J) those values above IDL.

A.1.7 Raw Data

Digestion Log* for flame AA/ICP present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Digestion Log for furnace AA present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Digestion Log for mercury present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Digestion Log for cyanides present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\*Weights, dilutions, and volumes used to obtain the reported values.

Measurement readout record present?	ICP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Flame AA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Furnace AA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Mercury	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Cyanides	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conventionals:	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Title: Appendix A.1: Data Assessment - Contract  
Compliance (Significant Element Review)

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Record of 4 point calibration present? Flame AA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Furnace AA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTE: If less than 4, other standards must be run immediately after calibration, and be  $\pm$  5% of true value.

Record of 4 point calibration present? Mercury	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cyanide	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Percent solids calculations present for soil (sediments)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	-------------------------------------	--------------------------	--------------------------

ACTION: If no for any of above, prepare Telephone Record Log and contact laboratory.

Was one prep blank analyzed for each 20 samples?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

MMB ACTION: If no, flag as estimated (J) all data which prep blank was not analyzed.

NOTE: If only one blank was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).

Do concentration of field blanks fall below two times IDL for all <u>aqueous</u> parameters? And soil parameters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	-------------------------------------	--------------------------

MMB ACTION: If no, reject (red-line) all data (aqueous) NO DATA AFFECTED. (except field blank) that has a concentration less than ten times the (three times for solids) field blank value but not flagged with a "U" (less than). F.M.

A.1.8.1 Form II (Initial and Continuing Calibration Verification)  
Present and complete?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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ACTION: If no, prepare Telephone Record Log and contact laboratory.

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Compliance (Significant Element Review)

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
A.1.8.2 Circle all values on Data Summary Sheet that are outside of contract windows. Are all calibration standards (initial and continuing) within 75-125%?	<input checked="" type="checkbox"/>	___	___
Are all calibration standards (initial and continuing) within 50-150%?	<input checked="" type="checkbox"/>	___	___
MPB ACTION: Flag as estimated (J) all data analyzed between a calibration standard of 50-75% or 125-150% recovery and nearest adjacent calibration standards reject (red-line) as unacceptable data if recovery of calibration standard is below 50% or above 150% for nearest adjacent standards.			
A.1.9.1 <u>Form III (Blanks) - Present and complete?</u>	<input checked="" type="checkbox"/>	___	___
MPB ACTION: If no, prepare Telephone Record Log and contact laboratory.			
A.1.9.2 <u>Form III (Blanks) and Field Blanks</u>			
Circle all calibration blank values on Data Summary Sheet that are above IDL. Are all calibration blank values less than Contract Required Detection Limits (CRDL)?	<input checked="" type="checkbox"/>	___	___
MPB ACTION: If no, flag as estimated (J) on Form I all data between calibration blank with value over CRDL and nearest adjacent calibration blank.			
Was an initial calibration blank analyzed?	<input checked="" type="checkbox"/>	___	___
Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (whichever is more frequent)?	<input checked="" type="checkbox"/>	___	___
CONTRACTOR ACTION: List those analytes which are out of compliance with the above criteria.			
MPB ACTION: If no, flag as estimated (J) all values not analyzed within 5 samples of calibration blank.			

Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

Do concentrations of prep blanks fall below two times IDL for all parameters?

YES NO N/A  
☐ ☒ ☐  
 ° K (cont) FM

NMB ACTION: If no, reject (red-line) all data that has a concentration less than ten times the prep blank value, but not flagged with a "U" (less than).

A.1.10.1 Form IV (ICP Interference Check Sample) - Present and complete? NOTE: Not required for furnace AA, flame AA, mercury and Ca, K, Na, and Mg.

☒ ☐ ☐

ACTION: If no, prepare Telephone Record Log and contact laboratory.

A.1.10.2 Form IV (ICP Interference Check Sample [ICS]) - Circle all values on Data Summary Sheet that are more than  $\pm 20\%$  of established mean value. Are all ICP Interference Check Sample results inside of control limits ( $\pm 20\%$  of true value)?

☒ ☐ ☐

If no, is concentration of Al, Ca, Fe, or Mg lower in sample than in ICS?

☐ ☐ ☒

NMB ACTION: If no, flag as estimated (J) those sample results for which ICS recovery is between  $\pm 20\%$  to  $50\%$  of mean value; and reject (red-line) those sample results for which ICS recovery is less than  $50\%$ . If ICS recovery is above  $150\%$ , reject positive results only (not flagged with a "U").

A.1.11.1 Form IX (ICP Serial Dilution) - Circle all values on Data Summary Sheet with a RPD greater than  $10\%$ . Are all ICP Serial Dilution results within control limit of  $10\%$  RPD?

☐ ☒ ☐

If no, are all associated data on Form I's flagged with an "E"?

☒ ☐ ☐

NMB ACTION: If not flagged with an "E" flag as estimated (J) all associated samples results for which RPD is greater than  $10\%$  but less than  $100\%$ ; reject (red-line) all associated sample results for which RPD is above  $100\%$ .

° Ca, K (cont) FM

Title: Appendix A.1: Data Assessment - Contract  
Compliance (Significant Element Review)

NOTE: Either diluted or undiluted analysis  
may be used to report final value as  
long as either is above 10 times IDL.

YES NO N/A

A.1.12.1 Form V (Spiked Sample Recovery) - Present and  
complete for each matrix type? NOTE: Not required  
for Ca, Mg, K, and Na (both matrix types), Al and  
Fe (soil only).

☒ ☐ ☐

ACTION: If no, prepare telephone record log and  
contact laboratory.

A.1.12.2 Form V (Spiked Sample Recovery)

Was field blank used for spiked samples?

☒ ☐ ☐

However, only 1  
water sample. No  
action taken, is  
not at fault.  
F.M.

If yes, was field blank described as such on  
Traffic Report?

☒ ☐ ☐

MMB ACTION: Flag all data as estimated (J) for  
which field blank was used as spiked  
sample.

Was at least one spiked sample prepared and  
analyzed for: every 20 water samples?

☒ ☐ ☐

Every 20 soil/sediment samples?

☒ ☐ ☐

For both AA and ICP when both are used for same  
analyte?

☒ ☐ ☐

MMB ACTION: If no, flag as estimated (J) all data  
for which spiked sample was not  
analyzed. NOTE: If only one spiked  
sample was analyzed for more than 20  
samples, then first 20 samples analyzed  
do not have to be flagged as estimated  
(J).

Circle all values on Data Summary Sheet that are  
outside of control limits (75% to 125%).

Are all recoveries within control limits?

☐ ☒ ☐

If no, is sample concentration greater than four  
times spike concentration?

☐ ☒ ☐

Title: Appendix A.1: Data Assessment - Contract  
Compliance (Significant Element Review)

ACTION: If no, circle those analytes on Form V for which sample concentration was not greater than four times the spike concentration.

YES      NO      N/A

Are any spike recoveries: a) greater than 150%?

— [✓] —

b) less than 50%?

✓ — [ ] —

MCB ACTION: If greater than 150%, reject (red-line) all associated aqueous data not flagged with a "U" (less than value). Likewise, flag associated soil/sediment data as estimated (J) which are not flagged with a "U".

° Sb, Cr, Pb, Mn, Zn (soil)

FM

If less than 50%, reject (red-line) all associated data for aqueous samples only. Flag associated soil/sediment data as estimated (J).

A.1.13.1 Form VI (Lab) Duplicates - Present and complete for each matrix type?

[✓] — —

ACTION: If no, prepare Telephone Record Log and contact laboratory.

A.1.13.2 Form VI (Lab) Duplicates

Was field blank used for spiked samples?

✓ — [ ] —

ACTION: If yes, flag all data as estimated (J) for which field blank was used as duplicate.

° Only one water sample.  
No action taken, lab not at fault.

FM.

Was at least one duplicate sample prepared and analyzed for: every 20 water samples?

[✓] — —

Every 20 soil/sediment samples?

[✓] — —

MCB ACTION: If no, flag as estimated (J) all data for which duplicate sample was not analyzed. NOTE: If only one duplicate sample was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).

Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

Circle all values on Data Summary Sheet that are outside of control limits (20% or CRDL).

Are all values within control limits?

Aqueous

Is any RPD greater than 50% where sample and duplicate are both greater than 5 times CRDL?

Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL, but greater than CRDL?

MMB ACTION: If yes, reject (red-line) all associated data.

Soil/Sediment

Is any RPD greater than 100% where sample and duplicate are both greater than 5 times CRDL?

Is any difference between sample and duplicate greater than 2 times CRDL where sample and/or duplicate is less than 5 times CRDL but greater than CRDL?

MMB ACTION: If yes, reject (red-line) all associated data.

A.1.13.3 Is "NC" reported in RPD column for any sample duplicate pair where either value is less than CRDL?

MMB ACTION: If no, write in "NC" with red pencil on Form VI and initial. Note under Data Acceptability Narrative (contract non-compliance).

A.1.14.1 Form VII (Instrument Detection Limits [IDL] and Laboratory Control Sample [LCS])

IDLs present and complete? Form XX

LCSs present and complete: aqueous?

soil/sediment?

YES NO N/A

[ ]

✓

[ ]

Al, Cd, Cr, Fe, Hg, Mn, Ni, V, Zn (soil)

[ ]

✓

[ ]

[ ]

✓

[ ]

✓

[ ]

[ ]

Cd, Hg

✓

[ ]

[ ]

Ni, V

✓

[ ]

[ ]

✓

[ ]

[ ]

✓

[ ]

[ ]

✓

[ ]

[ ]

Title: Appendix A.1: Data Assessment - Contract  
Compliance (Significant Element Review)

ACTION: If no, prepare Telephone Record Log  
and contact laboratory.

YES    NO    N/A

A.1.14.2 Form VII (Instrument Detection Limits (IDL) and  
Laboratory Control Sample (LCS))

Circle all IDL values greater than CRDL on data  
summary sheet.

IS IDL greater than CRDL for any parameter?

✓    [ ]    —

MMB ACTION: If yes, reject (red-line) all values  
flagged with "U" (less than "values").

o Pb - 14. Justified. Pb values >  
2x IDL. FR.

Circle all LCS values outside of control limits  
(80% to 120%) on data summary sheet.

Is any LCS value: between 50% and 80%?

—    [✓]    —

between 120% and 150%?

—    [✓]    —

less than 50%?

—    [✓]    —

greater than 150%?

✓    [ ]    —

MMB ACTION: Between 50% to 80%, flag all  
associated data as estimated (J);  
between 120% to 150% flag all  
positive (not flagged with a "U")  
results as estimated (J); less than  
50% reject (red-line) all data;  
greater than 150% reject all posi-  
tive results.

Aqueous - Judged by 80%-120%  
Soil - Judged by limits (within  
reason).  
o K; value 246%  
positive results rej.  
FR

A.1.15.1 Form VIII (Standard Additions Results) - Present?

[✓]    —    —

If no, is any Form I result coded with an "S"  
or a "+"?

ACTION: If yes, write request on Telephone Record Log.

A.1.15.2 Furnace Standard Addition Results - Form VIII

Is any post-digestion spike recovery less than  
10% for any result? (See RAW DATA)

—    [✓]    —

CONTRACTOR ACTION: Prepare a list of all results with  
recoveries less than 10%.

Title: Appendix A.1: Data Assessment - Contract  
Compliance (Significant Element Review)

MMB ACTION: If yes, reject (red-line) affected data.

YES NO N/A

Is coefficient of correlation less than 0.990 for any sample?

\_\_\_ [✓] \_\_\_

MMB ACTION: If yes, reject (red-line) affected data.

A.1.15.3 Form IX (ICP Serial Dilutions)

Present and complete for each matrix type?

[✓] \_\_\_ \_\_\_

ACTION: If no, write request on Telephone Record Log.

A.1.16.1 Dissolved Inorganics

Were any analyses performed for dissolved as well as total analytes?

\_\_\_ [✓] \_\_\_

If yes, apply the following questions only if both dissolved and total constituents are above CRDL (For SAS parameters: above 5 \* IDL).

Is the concentration of any dissolved analyte greater than its total concentration by more than 10%.

\_\_\_ [ ] ✓

Is the concentration of any dissolved analyte greater than its total concentration by more than 50%?

\_\_\_ [ ] ✓

MMB ACTION: If more than 10%, flag both dissolved and total values as estimated (J); if more than 50% reject (red-line) the data for both values.

CONTRACTOR ACTION: Prepare a list comparing differences between all dissolved and total analytes. Compute the differences as a percent of the total analyte only when both dissolved and total concentrations are above CRDL (5 \* IDC for SAS parameters).

Title: Appendix A.2: Data Assessment - (Core Review)

A.2.1 Data Verification

A.2.1.1 Choose at least one furnace AA parameter, one flame AA parameter, two ICP parameters, Mercury and cyanide (if determined) for the initial evaluation process. If errors are encountered during review, perform the following:

- a. Furnace AA - evaluate all other furnace parameters for the type of error found.
- b. Flame AA/ICP - evaluate another two parameters for same type error(s), if still encountered, then all other parameters must be examined for same type of error(s).

A.2.1.2 For each parameter chosen for the initial evaluation, all deliverables (except for Form I's - see below) must be examined for computation and transcription errors and omissions.

A.2.2 Ten percent of Form I's (at least one) should be evaluated initially for computation, transcription errors and/or omissions. If errors are found, check all other Form I's for same type error(s).

A.2.3 Data Assessment Checklist

List Parameter(s) chosen as Initial Evaluation Parameters for

Furnace As, Pb  
Flame -  
ICP Al, Zn

List Samples (Form I's) chosen for initial review: M3L583; M3L584A.2.3.1 Form I (Data Reporting)

<u>YES</u>	<u>NO</u>	<u>N/A</u>
------------	-----------	------------

Was a brief physical description of sample given in comments section?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

ACTION: If no, note exceptions under "Contract Problems/Non-Compliance" of data assessment narrative, or list separately and attach to checklist.

Do any computation/transcription errors exceed 10% of reported values?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Title: Appendix A.2: Data Assessment - (Core Review)

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
ACTION: If yes, prepare Telephone Record Log, and contact laboratory for corrected data.			
Are all "less than" values properly coded with a "U"?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ACTION: If no, write request for corrected data on Telephone Record Log, and red pencil affected data with "U" on Form I and initial.			
Were any samples diluted beyond requirements of contract?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If yes, were dilutions noted under Comments Section of Form I?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ACTION: Note under "Contract Problems/Non-Compliance" of data assessment narrative.			

A.2.3.2 Form II (Initial and Continuing Calibration Verification)

Do any computation/transcription errors exceed 10% of reported values?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ACTION: If yes, request corrected data and prepare Telephone Record Log; correct errors with red pencil and initial.			
Does Raw Data Record agree with weights and volumes required by CLP methods?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ACTION: If no, prepare Telephone Record Log, and contact laboratory for explanation.			

A.2.3.3 Linear Range

Was any sample result (raw data) higher than highest calibration standard (except ICP) or linear range (Form XIII) by more than 10%? (Note: Form XIII provided only quarterly.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MMB ACTION: If yes, flag result reported on Form I as estimated (J).			

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YES      NO      N/A

A.2.3.4 Form III (Blanks)

Do any computation/transcription errors exceed 10% of reported values?

\_\_\_\_ [✓] \_\_\_\_

ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.

A.2.3.5 Form IV (ICP Interference Check Sample [ICS])

Do any computation/transcription errors exceed 10% of reported values?

\_\_\_\_ [✓] \_\_\_\_

ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.

Was ICS analyzed at beginning and end of run (and at least once every 8 hours)?

[✓] \_\_\_\_

MMB ACTION: If no, flag as estimated (J) all samples for which AL, CA, Fe or MG is higher than in ICS.

A.2.3.6 Form V (Spike Sample Recovery)

Do any computation/transcription errors exceed 10% of reported values?

\_\_\_\_ [✓] \_\_\_\_

ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct errors with red pencil and initial.

A.2.3.7.1 Form VI (Duplicates)

Do any computation/transcription errors exceed 10% of reported values?

\_\_\_\_ [✓] \_\_\_\_

ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.

## Title: Appendix A.2: Data Assessment - (Core Review)

A.2.3.7.2 Field Duplicates

Were field duplicates analyzed?

<u>YES</u>	<u>NO</u>	<u>N/A</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ACTION: If yes, prepare a list of duplicate results and corresponding RPD. Apply CLP results criteria, and circle all values outside of contract/limits.

AqueousIs any RPD greater than 50% where sample and duplicate are both greater than 5 times CRDL?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL, but greater than CRDL?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

MMB ACTION: If yes, reject (red-line) associated data for field duplicates only.

Soil/Sediment

Is any RPD greater than 100% where sample and duplicate are both greater than 5 times CRDL?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

Is any difference between sample and duplicate greater than 2 times CRDL where sample and/or duplicate is less than 5 times CRDL but greater than CRDL?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

MMB ACTION: If yes, reject (red-line) all associated data for field duplicates only.

## Title: Appendix A.2: Data Assessment - (Core Review)

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
<b>A.2.3.8</b> <u>Form VII (Instrument Detection Limits [IDL] and Laboratory Control Sample ([LCS])</u>			
Do any computation/transcription errors exceed 10% of IDL and/or LCS values?		<u>1</u> <input checked="" type="checkbox"/>	
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.			
Was at least one LCS analyzed for every 20 <u>aqueous</u> samples?		<u>1</u> <input checked="" type="checkbox"/>	
CONTRACTOR ACTION: List exceptions and attach to checklist.			
MMB ACTION: If no, flag as estimated (J) all <u>aqueous</u> data for which LCS was not analyzed. NOTE: If only one LCS was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).			
<b>A.2.3.9</b> <u>Form IX (ICP Serial Dilution)</u>			
Do any computation/transcription errors exceed 10% of reported values?		<u>1</u> <input checked="" type="checkbox"/>	
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.			
<b>A.2.3.10</b> <u>Furnace AA Results</u>			
Were duplicate injections analyzed for each sample?		<u>1</u> <input checked="" type="checkbox"/>	

Title: Appendix A.2: Data Assessment - (Core Review)

<u>YES</u>	<u>NO</u>	<u>N/A</u>
------------	-----------	------------

MMB ACTION: If no, reject (red-line) all positive (not flagged with a "U") results.

CONTRACTOR ACTION: List all exceptions and attach to checklist.

For any concentrations above CRDL do duplicate injections agree to within  $\pm 20\%$  RSD?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

If no, was analysis repeated at least once?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

MMB ACTION: If no, flag result reported on Form I as estimated (J) when RSD is between 20 to 50%. If RSD is above 50%, reject (red-line).

If yes, was second run within  $\pm 20\%$  RSD?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

MMB ACTION: If no, do as above.

#### A.2.3.11 Form VIII (Standard Addition Results)

Are any MSA analyses missing from Form VII?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

Do any computation/transcription errors exceed 10% of reported values?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data, and correct errors with red pencil and initial.

Was "special quantitation procedure" followed correctly?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

ACTION: If no, note exceptions under "Contract Problems/Non-Compliance" of data assessment narrative, or prepare a separate list.

Title: Appendix A.3: Data Acceptability Narrative

Case# 8781-3551B Site IMS-TAT Ems. Response  
Lab RMALA.3.1 Are all data of acceptable quality? Yes      No ✓

If no, list exceptions with reason(s) for rejection of qualification as estimated value (J).

- ① Holding Times are an allowed time reference for which a sample will be guaranteed uniformity. For Mercury in aqueous samples, the validation consideration is 26 days from the time of sampling <sup>until</sup> the time of digestion. If the holding time is exceeded, sample concentration values might indicate a low bias due to degradation. The following samples were rejected due to holding time exceedence:  
Hg; Sample MBL 583 (Aqueous)
- ② Preparation blanks are designed to indicate any presence of laboratory contamination that would carry over into the samples. Contamination is considered present if the concentration found in the blank exceeds  $2 \times IDL$  and the sample values are less than  $10 \times$  the prep blank value. The following samples are rejected due to prep blank contamination:  
K; Samples MBL 584, 585 (soil)
- ③ Spike Sample analysis is designed to provide information on the

MXB Reviewer: Frank J. Merrin Date: 2-25-88  
SignatureVerified by: Heif Sheikh Date: 2-29-88  
Signature

## Title: Appendix A.3: Data Acceptability Narrative

## A.3.1 (Continuation)

effect of sample matrix on the digestion procedure and instrument performance. If the recovery on a known spike concentration is low, as it is in this case, a low bias must be considered for the respective analyte. Depending on the matrix and the % recovery, data can be considered either estimated or rejected. The following samples are considered estimated due to low spike recovery:

Sb; Cr; Pb; Mn; Zn MBL 584-585 (soil)

- ④ Duplicate sample analysis is an additional measure of instrument performance. If the RPD is outside the control limits of 20% or CRDL, whichever is applicable, data may not be considered as accurate. The following data is rejected due to an RPD > 100% where the sample and duplicate are both greater than  $5 \times IDL$ :

~~Ca; Mn; Samples MBL 584-585 (soil)~~

Ca; Mn; Samples MBL 584-585 (soil)

The following data is rejected due to the difference between the sample and duplicate being greater than  $2 \times \frac{CRDL}{IDL}$  where the sample and/or duplicate is less than  $5 \times CRDL$  but greater than CRDL:

Ni; V; Samples MBL 584-585 (soil)

- ⑤ A Laboratory control sample analysis (LCS) is designed to serve as a monitor of the efficiency of the digestion procedure. If the % recovery is not within the control limits of 80-120% for aqueous or TCM criteria for soil, data may not be considered accurate. The following data was rejected again due to a %R of 246 and a found concentration deemed to exceed reasonable limits: K; Samples MBL 585-584 (soil)

**REFERENCE NO. 16**

**MEMO**NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTIONTO File through Robert ZollnerFROM David Beeman *DB*DATE September 12, 1986SUBJECT International Metallurgy, Case #86-08-19-03, File #07-14-313Background:

At 1810 hrs. on 8-19-86, Newark Fire Dept., reported an unoccupied building at 196 Blanchard St., containing many chemicals. R. Zollner asked me to respond.

Contacts:

Bob Swales - Newark Emergency Management - 733-3660  
Walt Janicek - Newark Engineering - 733-4300  
Pete Nivens - Newark Health Dept. - 733-4392  
Pat Petrocelli - Archi- Schwart Realtors - 672-5500  
Yale Lazris - Atty. for International Metallurgy - 736-4600  
John Delchian - U.S. Trusteeship Services - 645-3014  
Santo Lalomia - Trustee - 279-8000

Findings:

Arrived at site at 1910 hrs., and met Bob Swales and members of Newark Fire Dept. Conversation with Swales revealed the following; the site was discovered by members of the Hudson County Prosecutors office during a shooting investigation; the site is the former International Metallurgy Company.

He reported that chemicals noted by firemen included ammonium acetate, copper cyanide, dimethylglycerin, potassium cyanide, sulfuric acid and potassium thiocyanate. He reported that the prosecutors office personnel had found several doors to the building open.

The building is a four story concrete structure on the east side of Blanchard St. There is an attached fenced in lot on either side, the one on the north being bordered by the Passaic River. I noted a for sale sign posted on the building belonging to Archie Schwarz Realty.

I entered the building accompanied by two Newark Fireman at 1925 hrs. There is a small lab on the first floor containing 50 to 75 lab sizes containers of various substances. No spills were noted here. There is an area on the fourth floor where there are hundreds of lab size containers. At least one containing boric acid was broken. There were several fiber containers labelled as cyanide compounds that appeared to still contain something. Several drums and kegs of sulfuric and nitric acid were noted, most of which appear to be empty. One nitric acid drum had apparently leaked its contents into a pail and on the floor. Other material noted included approximately five partially full fiber drums of 30% hydrogen peroxide solid. None of the large containers of corrosive or reactive material was in close proximity to other material. No active spills or leaks were noted.

The building contains many tanks, approximately 2000 to 5000 gallons each. Some of these are partially dismantled and apparently empty. There is a possibility that others contain material.

I left the building at 1950 hrs and entrances were secured and locked by the fire dept. I left the scene.

On 8-20-86 I called Archie Schwarz Realtors, I was directed to Pat Petrocelli who was familiar with the property. He explained that the Archie Schwarz sign was on the building because one of his clients was going to purchase the building, but that the sale had fallen through. He said his client had nothing to do with the property and he refused to give me any further information.

Bob Swales provided me with block and lot numbers of the site: Block 5001, lot 50. He told me that Yale Lazris was the attorney for International Metallurgy bankruptcy case. He also told me that the city was ready to foreclose on the property for non-payment of taxes, but that these proceedings were to be put on hold because of the conditions found at the site.

State Dept. records indicate the incorporators of International Metallurgical Services Inc. to be Victor and Barbara Pannone, 46 Baltustrol Road, Summit, New Jersey. The last annual report submitted for 1983.

On 8-25-86 I spoke by phone to Yale Lazris. He said his involvement in the case had ended and suggested I call U.S. Trusteeship Service as the company is now in Chapter 11. I called Trusteeship Services and spoke to John Deluchion. He told me that the U.S. Bankruptcy Court has appointed Santo J. Lalomia, 140 Market Street, Paterson, 07505 trustee for the bankrupt corporation. I called Mr. Lalomia's office. He was not in.

After several attempts. I was able to reach Mr. Lalomia on 8-27-86. I explained my reasons for calling and told him that in my opinion, a potentially hazardous condition exists at 196 Blanchard St. Mr. Lalomia advised me that the trustee account may not have enough money to cover disposal of the materials. I asked Mr. Lalomia to at least get some pricing before he made that decision and I gave him the numbers of several contractors. He agreed to talk to some contractors. I asked Mr. Lalomia to notify me as to what decision he comes to regarding clean-up.

On 9-10-86 I called Mr. Lalomia. He had not contacted any contractors yet. He reiterated that he doubted there was money to pay for clean-up.

Conclusions:

Potentially hazardous conditions exist at the subject site. The building is unguarded and it is likely that break-ins will occur. There are toxic and reactive chemicals on site.

John McDonald advises that a directive letter should be sent to the trustee because as a result of a Supreme Court decision, the Spill Fund would be entitled to first crack at any money available.

DB:JAP

**REFERENCE NO. 17**

Fire Department  
Division of Fire Prevention  
and Life Safety

3 - 18th Avenue  
Newark, New Jersey 07106

Claude M. Coleman  
Director

April 17, 1987

To : Deputy Chief Robert Buccine  
From : Fire Inspector Vincent Ladd  
Re : 196 -202 Blanchard Street

Sir,

I conducted an inspection at the above listed address on March 12, 1987. The inspection was conducted with the Court Appointed Trustees Representative (Paul Hashnity) and N.J.D.E.P. Dave Beeman. Mr Dave Beeman was there at my request.

The operations/business at this location has been stopped. Most of the salvageable equipment has been removed. The building is now vacant and found to be unsecured again. There are windows which are broken and/or open exposing the interior to the elements. There is roof openings which are also not secured. The fourth floor has dead birds through out it and while at the premises birds were flying into the windows attempting to fly out of the building. All floors has various amounts of rubbish and debris. All floors have hazardous materials (chemicals) and equipment. The following is a list of material found on each floor.

1st floor. The Lab room has bottles of chemical and solutions. These bottles and containers range from pints to gallons. Some containers are marked Solution with no other information. Other containers noted

are: Potassium Persulfate  
Cupric Sulfate

Cinchonine  
Sodium Hydroxide

The rear storage room found 55-gallon containers (drums) of:

Ferric Chloride 42%

Hydrochloric Acid

Also 1 cylinder of Acetylene Gas ( approx 80-100 lbs )

Con't on Page two

Fire Department  
Division of Fire Prevention  
and Life Safety

1010 - 18th Avenue  
Clark, New Jersey 07106

Claude M. Coleman  
Director

April 17, 1987

To : Deputy Chief Robert Buccine  
From : Fire Inspector Vincent Ladd  
Re : Page two of report on  
196-202 Blanchard Street

2nd floor. Apparant maintenance floor. maintenance/repair area with combust-  
ible material ( oils, and etc.). Other material found through out  
the second floor including storage area:

Microposet Remover ( acid )

Sulfuric Acid 66°

Sodium Sulfide

H.T.H. Dry Chloride

( on top of combustible )

3rd floor.

Hallway The storage of various material was found in the hall-  
way towit:

Fibler drums (55-gallon) of unknown material (Resins ???)  
this material appears to be able to burn and give off fumes.

Several containers of Nickel Powder (metal)

Several containers of Zine Dust

Both sides of the building has various tanks (over 2000 gallons)  
which previously contained chemicals and appears to be empty but  
there may be residue of hazardous material inside the tanks.

also found 55-gallon drum of Hydroyan Peroxide 30%

4th floor.

This appears to be the storage area for the various chemicals and  
also treatment area. Found various types of heat-treatment equip-  
ment which appear to have hazardous material residues still in and  
on them. The storage area for the chemicals is apprx., 15'x15' w/  
metal shelves. The chemicals are side by side both on the floor  
and on the shelves. The material is mixed with all hazard types  
side by side, on top of each other or in boxes (poisons, acids & etc).  
the following is a list of the material noted:

Con't on page three

Fire Department  
Division of Fire Prevention  
and Life Safety

1010 - 18th Avenue  
Newark, New Jersey 07106

Claude M. Coleman  
Director

April 17, 1987

To : Deputy Chief Robert Buccine  
From : Fire Inspector Vincent Ladd  
Re : Page three of report  
196-202 Blcahard Street

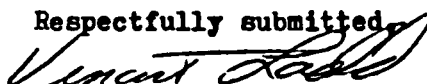
th floor

list of material:

Sulfurous Acid	Triethylene Glycol
Ammonium Sulfide	Magnesium Perchlorate
Aluminium Nitrate	Butyl Acetate
Acetic Acid	Alumina Activated
Monochlorobenzene	Aluminium Hydroxide
Dichlor Benzene	Aluminium Chloride
Hydrochloric Acid	Ammonium Hypophosphite
4-Methyl 2-Pentanone	Ammonium Persulfate
Ethylene Glycol Monoethyl Ether	Ammonium Bifluoride
Benzotriazole (?)	Ammonium Oxalate
Acid Boric Anhydride	Ammonium Sulfide
Ammonium Citrate	Ammonium Fluoride
Disodium (Ethylenedinitride )	Ascarite
Tetraac	Ammonium Molybdate
Barium Carbonate	Magnesium Chloride
Pyrogallol	Lead Nitrate
Mercuric Potassium Iodide	Copper(ous) Cyanide
Sodium Chloride	Potassium Ferrocyanide
Sulfurous Acid (on top of oxidizer)	Sodium Chromate - Oxidizer
Diethylaminopropylamine	

Due to the condition of the material and the need for special protective equipment a detailed list of material and amounts is not with in this inspectors duty at this time.

Respectfully submitted,



Vincent Ladd  
Fire Protection/Prevention Insp.

**REFERENCE NO. 18**

**PHONE CONVERSATION RECORD**

Conversation with:

Name DAN JANABIS  
Company NJDEP  
Address Trenton  
Phone 609-633-1179  
Subject Well Head Protection

Date 11, 16, 92  
Time 445 AM/PM

☒ Originator Placed Call

☐ Originator Received Call

W.O. NO. 04220-016-081

Notes:

Although the Bureau of UST's has designated an area of 2000' from Municipal Water Supply wells, as of November 1992 there is no designated Well Head Protection areas in New Jersey.

- ☒ File Project File  
☐ Tickle File \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
☐ Follow-Up By: \_\_\_\_\_  
☐ Copy/Route To: \_\_\_\_\_

Follow-Up-Action: \_\_\_\_\_

Originator's Initials DB

**REFERENCE NO. 19**

## PROJECT NOTE

TO: International Metallurgical T. Varner Originator  
Services File DATE: May 6, 1993  
FROM: Thomas Varner W.O. NO.: 0420-016-081-0002  
SUBJECT: Summary of groundwater use within 4 miles  
of the site.

NOTES: The following municipalities exist within 4  
miles of the site; their sources of drinking water,  
based on the attached Phone Conversation Records,  
are listed next to them.

<u>Municipality</u>	<u>Source</u>
<u>Newark</u>	<u>Wanaque and Pequannock Reservoirs</u>
<u>East Orange</u>	<u>Wells located in Livingston,</u> <u>Millburn, and Florham Park (outside</u> <u>4 mile radius).</u>
<u>Kearny</u>	<u>Wanaque Reservoir</u>
<u>Bellville</u>	<u>Newark system</u>
<u>Bayonne</u>	<u>Wanaque Reservoir</u>
<u>Harrison</u>	<u>Passaic Valley Water Commission</u> <u>(Passaic River at Totowa and Wanaque</u> <u>Reservoir)</u>
<u>Jersey City</u>	<u>Brantton Reservoir</u>

**PROJECT NOTE (CONT'D)**

TO: International Metallurgical  
Services file

FROM: Thomas Jarner

SUBJECT: Summary of groundwater use within 4 miles  
of the site (cont'd)

DATE: May 6, 1993

W.O. NO.: 04200-016-081-0002

T. Jarner Originator

NOTES: North Arlington Passaic Valley Water Commission  
(Passaic River at Totowa and  
Wanaque Reservoir)

None of the above are within a 4-mile radius of  
the site or along the 15-mile surface water  
migration pathway. (See Ref. Nos. 3 and 21).

**PHONE CONVERSATION RECORD**

Conversation with:

Date 2 / 1 / 93

Name Tony Scillia

Time 1.50 AM/PM PM

Company East Orange Water Dept.

Address 99 S. Grove St.

☒ Originator Placed Call

East Orange 07019

☐ Originator Received Call

Phone (201) 266-8869

W.O. NO. 4200-016-G31-0002

Subject Water Supply For East Orange

Notes: Livingston; Millburn; Florham Park  
18 wells

All potable water for East Orange comes from 18  
public supply wells located in Livingston, Millburn  
and Florham Park, New Jersey.

Andrew F. Schweitzer  
2-1-93

☐ File \_\_\_\_\_

Follow-Up-Action: \_\_\_\_\_

☐ Tickle File \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

☐ Follow-Up By: \_\_\_\_\_

☐ Copy/Route To: \_\_\_\_\_

Originator's Initials AFS



RARITAN PLAZA I  
4TH FLOOR, RARITAN CENTER  
EDISON, NJ 08837-3616  
908-417-5800 • FAX: 908-417-5801

22 December 1992

Mr. Tony Scillia

99 S. Grove St  
East Orange, NJ 07019  
(908) 266-8869

Dear Mr. Scillia:

I am writing this letter to request information regarding the use of groundwater in East Orange. This information will be used by Roy F. Weston, Inc. (WESTON) to evaluate the potential environmental impact of hazardous waste sites in the area. Specifically, I am interested in:

- Where does the drinking water supply for East Orange come from? Public supply, private wells or both?
- Where are these public supply wells located?
- If possible to indicate, where are the private wells located?
- How many people or accounts are served by each particular well and how many people are on private wells?
- Do you serve any townships other than East Orange?
- If there were an emergency involving local groundwater contamination, is there a backup system to supply people with potable water?
- What aquifer or reservoir are the public supply wells drawn from?
- If applicable, are the public supply wells interconnected?

If available, a map indicating the location of any or all public supply or private wells would be most helpful. Please bill me for any charges or expenses if applicable. Your assistance in this effort will be greatly appreciated. If you have any questions or comments, please contact me at (908) 225-3990.



Mr. Tony Scillia  
Water Department

-2-

22 December 1992

This evaluation is to be performed in accordance with the direction of the United States Environmental Protection Agency (U.S. EPA) under Contract No. 68-W9-0022. Information regarding the EPA-WESTON contract may be obtained by contacting the EPA, Region II, 26 Federal Plaza, New York, New York 10278.

Sincerely,

ROY F. WESTON, INC.

Gretchen Chapman  
Assistant Engineer

**PHONE CONVERSATION RECORD**

**Conversation with:**

Name Carol Donnelly  
Company Kearny Water Dept.  
Address 570 Elm St.  
Kearny, NJ 07032  
Phone (201) 991-2700  
Subject Drinking Supply - Kearny

Date 2 / 1 / 93

Time 1:55 AM/PM PM

☐ Originator Placed Call

☐ Originator Received Call

W.O. NO. 4200-086-081-0002

Fax: (201) 991-0723

Notes: Wanaque - 15% owner.

North Jersey District Water Supply Commission  
Some Industrial wells.

There are no potable wells in Kearny. All  
drinking water comes from Wanaque reservoir  
of which Kearny is 15% partner. There are some  
industrial wells used for heating etc.

Andrew D. Schweitzer  
2-1-93

☐ File \_\_\_\_\_

☐ Tickle File \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

☐ Follow-Up By: \_\_\_\_\_

☐ Copy/Route To: \_\_\_\_\_

Follow-Up-Action: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Originator's Initials AES



RARITAN PLAZA I  
4TH FLOOR, RARITAN CENTER  
EDISON, NJ 08837-3616  
908-417-5800 • FAX: 908-417-5801

22 December 1992

(201) 991-2700

Ms. Carol Donnelly  
Kearny Water Department  
570 Elm Street  
Kearny, New Jersey 07032

Dear Ms. Donnelly:

I am writing this letter to request information regarding the use of groundwater in Kearny. This information will be used by Roy F. Weston, Inc. (WESTON) to evaluate the potential environmental impact of hazardous waste sites in the area. Specifically, I am interested in:

- Where does the drinking water supply for Kearny come from? Public supply, private wells or both? *Wanaque 15%*
- Where are these public supply wells located?
- If possible to indicate, where are the private wells located?
- How many people or accounts are served by each particular well and how many people are on private wells?
- Do you serve any townships other than Kearny?
- If there were an emergency involving local groundwater contamination, is there a backup system to supply people with potable water? *Passaic Valley*
- What aquifer or reservoir are the public supply wells drawn from?
- If applicable, are the public supply wells interconnected?

If available, a map indicating the location of any or all public supply or private wells would be most helpful. Please bill me for any charges or expenses if applicable. Your assistance in this effort will be greatly appreciated. If you have any questions or comments, please contact me at (908) 225-3990.



Ms. Carol Donnelly  
Kearny Water Department

-2-

22 December 1992

This evaluation is to be performed in accordance with the direction of the United States Environmental Protection Agency (U.S. EPA) under Contract No. 68-W9-0022. Information regarding the EPA-WESTON contract may be obtained by contacting the EPA, Region II, 26 Federal Plaza, New York, New York 10278.

Sincerely,

ROY F. WESTON, INC.

Gretchen Chapman  
Assistant Engineer

**PHONE CONVERSATION RECORD**

Conversation with:

Name ?

Company Bayonne Water Engineering

Address \_\_\_\_\_

Phone (201) 858-6172

Subject Drinking water Supply in Bayonne

Date 2 / 1 / 93

Time 2:05 AM/PM (PM)

☒ Originator Placed Call

☐ Originator Received Call

W.O. NO. 4260 - 016 - 081 - 0007

Notes:

All drinking water comes from Wanaque.  
No public supply wells or private potable wells.

Andrew E. Schweitzer  
2-1-93

☐ File \_\_\_\_\_

☐ Tickle File \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

☐ Follow-Up By: \_\_\_\_\_

☐ Copy/Route To: \_\_\_\_\_

Follow-Up-Action: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Originator's Initials AFS

**PHONE CONVERSATION RECORD**

Conversation with:

Date 2 / 1 / 93

Name Thomas Cisdelli - Superintendent

Time 2:15 AM/PM (PM)

Company Harrison Water Dept

Address \_\_\_\_\_

☒ Originator Placed Call

☐ Originator Received Call

Phone (201) 268-2431

W.O. NO. 4200-016-081-0057

Subject Drinking Supply in Harrison

Notes:

PVWC

Artesian Well - at school

They buy all of their water in bulk from the  
Passaic Valley Water Commission. There is one potable  
well located at the high school; it is an artesian well.  
It is not used for drinking water. There are no industrial  
wells (in use)

Andrew F. Schwartz  
2-1-93

☐ File \_\_\_\_\_

Follow-Up-Action: \_\_\_\_\_

☐ Tickle File \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

☐ Follow-Up By: \_\_\_\_\_

☐ Copy/Route To: \_\_\_\_\_

Originator's Initials AFS



A. Schweitzer

Originator

## PHONE CONVERSATION RECORD

Conversation with:

Name Anthony Debarros

Company City of Newark Water Supply

Address \_\_\_\_\_

Phone (201) 256-4965

Subject Water use in Newark

Date 12 / 30 / 92

Time 9:45 AM / PM

☒ Originator Placed Call

☐ Originator Received Call

W.O. NO. 4200-016-001-0008

Notes: Mr. Debarros informed me that Newark's water supply comes from two sources. The 2 sources are both surface water. The Wanauque which serves about 40% of the City including the Ironbound section of Newark. The Pequannock covers the rest of Newark including the Western half of the City. There are no domestic wells used in the City of Newark.

The Wanauque supply is located in Wanauque near the New York border. The Pequannock is located in West Milford Twp. The Wanauque is owned by the North Jersey District Water Supply Commission and the Pequannock is owned by the City of Newark.

In case of emergency, drinking water would be taken from another source (i.e. Jersey City, reservoirs etc.)

These supply serve other towns including Belleville and Bloomfield.

Andrew J. Schweitzer  
12-30-92

☐ File \_\_\_\_\_

☐ Tickle File \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

☐ Follow-Up By: \_\_\_\_\_

☐ Copy/Route To: \_\_\_\_\_

Follow-Up-Action: Can call back if need be.

Originator's Initials APS

CLIENT/SUBJECT \_\_\_\_\_ W.O. NO. \_\_\_\_\_

TASK DESCRIPTION \_\_\_\_\_ TASK NO. \_\_\_\_\_

PREPARED BY \_\_\_\_\_ DEPT \_\_\_\_\_ DATE \_\_\_\_\_

MATH CHECK BY \_\_\_\_\_ DEPT \_\_\_\_\_ DATE \_\_\_\_\_

METHOD REV. BY \_\_\_\_\_ DEPT \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED BY	
<div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div>	
DEPT _____	DATE _____

## Questions to ask for Water Departments:

- Where does your drinking water supply come from?  
Public supply, private wells or both?  
*40% Newark City*
- Where are these public and private wells located?  
*Wanaque, Irvington, Newark, Westfield, Union*
- Do you serve any other towns besides your own?  
*Belleville, Bloomfield, Wayne, Twp, Pequannock*
- If there were an emergency involving local groundwater contamination, is there a backup system to supply people with potable water?  
*Yes, other reservoir*
- What aquifer or reservoir are the public supply wells drawn from?  
*Delaware City, Pequannock, Water Supply*

Cities: Newark (201) 256-4965, Union

Irvington  
South Orange  
Maplewood  
W. Orange  
Hillside  
Union

North Jersey

Distr Water Supply

Comm.

Mantoloking

Kearny

North Arlington Contact: Daniel Bernardinelli - Waterhead

(201) 256-4965

Anthony DeBarra - City of Newark - Water Supply

East Orange has wells

**PHONE CONVERSATION RECORD**

**Conversation with:**

Name Carol Donnelly  
Company Kearny Water Dept  
Address 570 Elm St  
Kearny NJ 07032  
Phone 201 991-0723  
Subject Well info

Date 12/22/92

Time \_\_\_\_\_ AM/PM (PM)

☒ Originator Placed Call

☐ Originator Received Call

W.O. NO. \_\_\_\_\_

**Notes:**

She I will fax her the list of  
relevant questions regarding groundwater

- She returned my questions on 2/15/93  
(attached)

- ☐ File \_\_\_\_\_
- ☐ Tickle File \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_
- ☐ Follow-Up By: \_\_\_\_\_
- ☐ Copy/Route To: \_\_\_\_\_

Follow-Up-Action: \_\_\_\_\_

Originator's Initials \_\_\_\_\_

2/15/93

**KEARNY WATER DIVISION**  
**370 Elm Street, Kearny, NJ 07032-3605**

**\*\*\* FAX TRANSMISSION \*\*\***

**Information Page**

TO: GRETCHEN CHAPMAN  
 FAX #: 908-225-3240  
 FROM: CAROL DONNELLY  
 INSTRUCTIONS: See ATTACHED

NUMBER OF PAGES TO FOLLOW: 1

TRANSMISSION DATE: 2/12/93

ACKNOWLEDGMENT NEEDED: \_\_\_\_\_ NOT NEEDED: ☒

(Acknowledge to: 201-998-5353)

OUR FAX MACHINE NUMBER IS: 201-991-0723

NOTE: Sorry this is so late ... I just  
uncovered your fax at the bottom  
of my desk file.  
Sorry for the  
delay in an answer

"PRESERVE THE FUTURE OF OUR DRINKING WATER, PROTECT IT TODAY"



RARITAN PLAZA I  
4TH FLOOR, RARITAN CENTER  
EDISON, NJ 08837-3616  
908-417-5800 • FAX: 908-417-5801

22 December 1992

Ms. Carol Donnelly  
Kearny Water Department  
570 Elm Street  
Kearny, New Jersey 07032

Dear Ms. Donnelly:

I am writing this letter to request information regarding the use of groundwater in Kearny. This information will be used by Roy F. Weston, Inc. (WESTON) to evaluate the potential environmental impact of hazardous waste sites in the area. Specifically, I am interested in:

- Where does the drinking water supply for Kearny come from? Public supply, private wells or both? *WANAQUE RESERVOIR, SURFACE Supply*
- Where are these public supply wells located? *NONE*
- If possible to indicate, where are the private wells located? *NONE*
- How many people or accounts are served by each particular well and how many people are on private wells? *NONE*
- Do you serve any townships other than Kearny? *YES, EAST NEWARK*
- If there were an emergency involving local groundwater contamination, is there a backup system to supply people with potable water? *N/A* ~~WE DO NOT DRINK SURFACE GROUNDWATER~~
- What aquifer or reservoir are the public supply wells drawn from? *NO WELLS*
- If applicable, are the public supply wells interconnected? *N/A*

If available, a map indicating the location of any or all public supply or private wells would be most helpful. Please bill me for any charges or expenses if applicable. Your assistance in this effort will be greatly appreciated. If you have any questions or comments, please contact me at (908) 225-3990.

*Carol  
12/24/92  
MA*

*N/A*



G. Chapman  
Originator

0037T

## PHONE CONVERSATION RECORD

Conversation with:

Name Anthony Sallica  
Company East Orange Water  
Address 99 S Grove St  
East Orange NJ 07019  
Phone 201-266-8869  
Subject well info

Date 12/22/93

Time \_\_\_\_\_ AM/PM

☒ Originator Placed Call

☐ Originator Received Call

W.O. NO. 04200-016-081-0002  
IMS

Notes:

- I faxed him a list of relevant ground water questions after discussing it with him.
- He returned my questions of 2/15/93 (attached)

☐ File \_\_\_\_\_

☐ Tickle File \_\_\_\_\_

☐ Follow-Up By: \_\_\_\_\_

☐ Copy/Route To: \_\_\_\_\_

Follow-Up-Action: \_\_\_\_\_

Originator's Initials \_\_\_\_\_

2/15/93

BOARD OF WATER COMMISSIONERS  
CITY OF EAST ORANGE

99 SOUTH GROVE STREET, EAST ORANGE, NJ 07019  
TELEPHONE: 201-266-8869 FAX: 201-675-7490

CARDELL COOPER, MAYOR

HARRY T. ROMAN  
PRESIDENT  
LESTER B. SMITH  
VICE PRESIDENT  
ROSCOE F. JENNINGS  
SECRETARY

ANTHONY J. SCILLIA P.E.  
WATER ENGINEER  
VINCENT L. DE VIVO  
BUSINESS ADMINISTRATOR

February 11, 1993

Ms. Gretchen Chapman, Asst. Engineer  
Roy F. Weston, Inc.  
Raritan Plaza #1, 5th Floor  
Raritan Center  
Edison, New Jersey 08837

Dear Ms. Chapman:

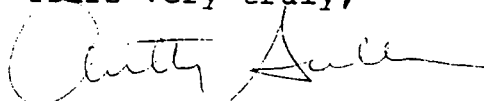
In response to your letter of December 22, 1992, please be advised that the potable water supply for the City of East Orange is supplied entirely by public wells located on the City's 2300 acre water reserve in the towns of Livingston, Millburn and Florham Park.

There are no potable private wells in East Orange. Public supply serves 90,000 people exclusively in East Orange. Other townships are only served on an emergency basis.

The East Orange system is totally interconnected with its neighboring communities for a backup supply in case of contamination or other major failure.

East Orange wells are part of the Buried Valley aquifer system of western Essex and eastern Morris counties. All of our wells are interconnected in the sense that they pump to a central storage location before distribution to our customers.

Yours very truly,



Anthony J. Scillia, P.E.  
Water Engineer

AJS:sb



0041 T

J Chapman  
Originator**PHONE CONVERSATION RECORD**

## Conversation with:

Name Vince Voltaggio  
Company Belleville Water DeptAddress Belleville NJPhone 201-450-3414Subject Belleville Drinking Water SupplyDate 3, 25, 93

Time \_\_\_\_\_ AM/PM

☒ Originator Placed Call☐ Originator Received Call

W.O. NO. \_\_\_\_\_

## Notes:

They get their drinking water  
from Newark who gets their water  
from Wanegue

He knows of no private drinking water  
supply wells.

He recommended to speak to Steve Vigil

☐ File \_\_\_\_\_☐ Tickle File \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_☐ Follow-Up By: \_\_\_\_\_☐ Copy/Route To: \_\_\_\_\_

Follow-Up-Action: \_\_\_\_\_

Originator's Initials \_\_\_\_\_

**PHONE CONVERSATION RECORD**

Conversation with:

Name Bill Coupe  
Company North Arlington Water Dept.  
Address \_\_\_\_\_

Date 2 / 2 / 93  
Time 3:55 AM/PM (PM)

Phone (201) 955-5665

☒ Originator Placed Call  
☐ Originator Received Call

W.O. NO. 4200-016-081-0002

Subject North Arlington Water Dept. Drinking Water

Notes: Passaic Valley Water Commission

Drinking water comes from Passaic Valley Water Commission. No wells are used for potable purposes.

- ☐ File \_\_\_\_\_  
☐ Tickle File \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
☐ Follow-Up By: \_\_\_\_\_  
☐ Copy/Route To: \_\_\_\_\_

Follow-Up-Action: May follow up on industrial wells

Originator's Initials ARS

**PHONE CONVERSATION RECORD**

Conversation with:

Name ?

Company Bayonne Water Engineering

Address \_\_\_\_\_

Phone (201) 858-6172

Subject Drinking water Supply in Bayonne

Date 2 / 1 / 93

Time 2.05 AM/PM

☒ Originator Placed Call

☐ Originator Received Call

W.O. NO. 4200 - alk - 081 - 0007

Notes:

All drinking water comes from Wanaque.  
No public supply wells or private potable wells.

Andrew E. Schweitzer  
2-1-93

- ☐ File \_\_\_\_\_
- ☐ Tickle File \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_
- ☐ Follow-Up By: \_\_\_\_\_
- ☐ Copy/Route To: \_\_\_\_\_

Follow-Up-Action: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Originator's Initials AES

**PHONE CONVERSATION RECORD**

Conversation with:

Date 05 / 06 / 93

Name Steve White

Time 10:30 AM/PM

Company Jersey City Water Dept.

Address \_\_\_\_\_

☒ Originator Placed Call

☐ Originator Received Call

Phone (201) 547-5150

W.O. NO. 04200-016-081-0002

Subject Water supply sources

Notes:

Mr. White told me that Jersey City obtains all of its drinking water from surface supplies, namely the Boonton Reservoir, which is fed by the Rockaway River. There is also an Upper County Reservoir that feeds the Boonton Reservoir. Total capacity is 11 billion gallons. No wells are in use or on standby.

☒ File Int'l Metallurgical Services

Follow-Up Action: \_\_\_\_\_

☐ Tickle File \_\_\_\_\_

☐ Follow-Up By: \_\_\_\_\_

☐ Copy/Route To: \_\_\_\_\_

Originator's Initials

TAV

**PHONE CONVERSATION RECORD**

Conversation with:

Name Ethyl Senat

Company Passaic Valley Water Commission (PVWC)

Address \_\_\_\_\_

Phone (201) 340-4300

Subject Water supply sources

Date 05 / 06 / 93

Time 11:40 (AM/PM)

☒ Originator Placed Call

☐ Originator Received Call

W.O. NO. 04200-016-081-0002

Notes:

Mr. Senat told me that Harrison and North  
Arlington obtain their water via the PVWC from  
the Passaic River at Totowa and the Wanaque  
Reservoir. No wells are used.

☒ File Int'l Metallurgical Services Follow-Up-Action: \_\_\_\_\_

☐ Tickle File \_\_\_\_\_

☐ Follow-Up By: \_\_\_\_\_

☐ Copy/Route To: \_\_\_\_\_

Originator's Initials

TAV

**REFERENCE NO. 20**

**PHONE CONVERSATION RECORD**

Conversation with:

Name Beth Tomito  
Company Newark Engineers' Office  
Address \_\_\_\_\_

Date 03 / 31 / 93  
Time 1615 AM/PM (PM)

☐ Originator Placed Call

☒ Originator Received Call

Phone (201) 733-4300

W.O. NO. 04200-016-081-0002

Subject Floodplain information

\$ 04200-016-081-0007

Notes: Ms. Tomito gave me the following information after I described the locations of the IMS and Apex Color Works sites to her:

- IMS property is located in zone A5, a 100-year floodplain
- A portion of Apex is within the 100-year floodplain and a portion is within the 500-year floodplain

☒ File International Metallurgical Services (ARCS)  
Apex Color Works (ARCS)

Follow-Up-Action: \_\_\_\_\_

☐ Tickle File \_\_\_\_\_

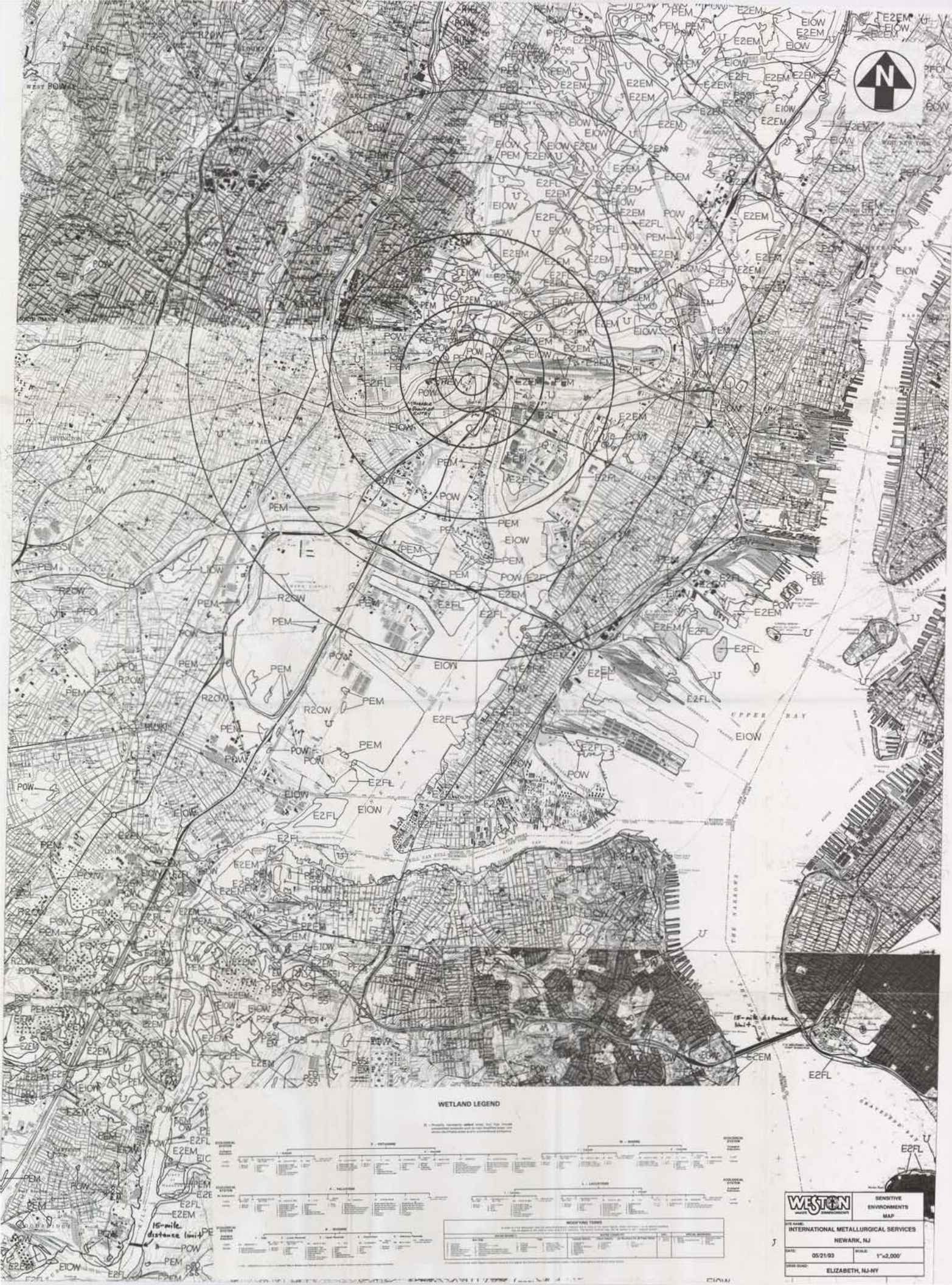
☐ Follow-Up By: \_\_\_\_\_

☒ Copy/Route To: G. Chapman

Originator's Initials

TAV

**REFERENCE NO. 21**



**REFERENCE NO. 22**

Let's protect our earth



# Surface Water Quality Standards

N.J.A.C. 7:9-4.1 et seq.



AUGUST 1989

New Jersey Department of Environmental Protection  
Division of Water Resources

4. Public potable water supply after such treatment as required by law or regulation; and
5. Any other reasonable uses.

(d) In all SE1 waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;
2. Maintenance, migration and propagation of the natural and established biota;
3. Primary and secondary contact recreation; and
4. Any other reasonable uses.

(e) In all SE2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;
2. Migration of diadromous fish;
3. Maintenance of wildlife;
4. Secondary contact recreation; and
5. Any other reasonable uses.

→ (f) In all SE3 waters the designated uses are:

1. Secondary contact recreation;
2. Maintenance and migration of fish populations;
3. Migration of diadromous fish;
4. Maintenance of wildlife; and
5. Any other reasonable uses.

(g) In all SC waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;
2. Primary and secondary contact recreation;
3. Maintenance, migration and propagation of the natural and established biota; and
4. Any other reasonable uses.

(e) The surface water classifications in Table 3 are for waters of the Passaic, Hackensack and New York Harbor Complex Basin:

TABLE 3

<u>WATER BODY</u>	<u>CLASSIFICATION</u>
→ ARTHUR KILL (Perth Amboy) - The Kill and its saline New Jersey tributaries between the Outerbridge Crossing and a line connecting Ferry Pt., Perth Amboy to Wards Pt., Staten Island, New York	SE2
(Elizabeth) - From an east-west line connecting Elizabethport with Bergen Pt., Bayonne to the Outerbridge Crossing	SE3
(Woodbridge) - All freshwater tributaries	FW2-NT
BEAR SWAMP BROOK (Mahwah) - Entire length	FW2-TP(C1)
BEAR SWAMP LAKE (Ringwood)	FW2-NT(C1)
BEAVER BROOK (Meriden) - From Splitrock Reservoir Dam downstream to Meriden Road Bridge	FW2-TM
(Denville) - Meriden Road Bridge to Rockaway River	FW2-NT
BEECH BROOK (West Milford) - From State line downstream to Wanaque River	FW2-TM
BELCHER CREEK (W. Milford) - Entire length	FW2-NT
BERRYS CREEK (Secaucus) - Entire length	FW2-NT/SE2
BLACK BROOK (Meyersville) - Entire length, except segment described below	FW2-NT
(Great Swamp) - Segment and tributaries within the Great Swamp National Wildlife Refuge	FW2-NT(C1)
BLUE MINE BROOK (Wanaque) - Entire length, except segment described below	FW2-TM
(Norvin Green State Forest) - That portion of the stream and any tributaries within the Norvin Green State Forest	FW2-TM(C1)
BRUSHWOOD POND (Ringwood)	FW2-TM(C1)
BUCKABEAR POND (Newfoundland) - Pond, its tributaries and connecting stream to Clinton Reservoir	FW2-NT(C1)
BURNT MEADOW BROOK (Stonetown) - Entire length	FW2-TP(C1)
CANISTEAR RESERVOIR (Vernon)	FW2-TM
CANISTEAR RESERVOIR TRIBUTARY (Vernon) - The southern branch of the eastern tributary to the Reservoir	FW1
CANOE BROOK (Chatham) - Entire length	FW2-NT

JACKSON BROOK	
(Mine Hill) - Source to the boundary of Hurd Park, Dover	FW2-TP(C1)
(Dover) - Hurd Park to Rockaway River	FW2-NT
JENNINGS CREEK (W. Milford) - State line to Wanaque River	FW2-TP(C1)
JERSEY CITY RESERVOIR (Boonton)	FW2-TM
KANOUSE BROOK (Newfoundland) - Entire length	FW2-TP(C1)
KIKEOUT BROOK (Butler) - Entire length	FW2-NT
KILL VAN KULL (Bayonne) - Westerly from a north-south line connecting Constable Hook (Bayonne) to St. George (Staten Island, New York)	SE3
LAKE RICKONDA OUTLET STREAM (Monks) - That segment of the outlet stream from Lake Rickonda within Ringwood State Park	FW2-TM(C1)
LAKE STOCKHOLM BROOK	
(Stockholm) - Entire length, except tributaries described separately below	FW2-TP(C1)
(Stockholm) - Westerly tributary located entirely within the boundaries of the Newark Watershed	FW1(tp)
(Stockholm) - Brook between Hamburg Turnpike and Williamsville-Stockholm Rd. to its confluence with Lake Stockholm Brook, north of Rt. 23	FW1(tp)
LITTLE POND BROOK (Oakland) - Entire length	FW2-TP(C1)
LOANTAKA BROOK	
(Green Village) - Entire length, except segment described below	FW2-NT
(Great Swamp) - Brook and all tributaries within the boundaries of Great Swamp National Wildlife Refuge	FW2-NT(C1)
LUD-DAY BROOK	
(Camp Garfield) - Source to confluence with a tributary from Camp Garfield	FW1
MACOPIN RIVER	
(Newfoundland) - Source to Echo Lake dam	FW2-NT
(Newfoundland) - Echo Lake dam to Pequannock River	FW2-TM
MEADOW BROOK (Wanaque) - Skyline Lake to Wanaque River	FW2-NT
MILL BROOK	
(Randolph) - Source to Rt. 10 bridge	FW2-TP(C1)
(Randolph) - Rt. 10 bridge to Rockaway River	FW2-NT
MORSES CREEK - Entire length	FW2-NT/SE3
MOSSMAN'S BROOK - See CLINTON BROOK	
MT. TABOR BROOK (Morris Plains) - Entire length	FW2-NT
NEWARK BAY (Newark) - North of an east-west line connecting Elizabethport with Bergen Pt., Bayonne up to the mouths of the Passaic and Hackensack Rivers	SE3
NOSSENZO POND (Upper Macopin)	FW2-NT(C1)
OAK RIDGE RESERVOIR (Oak Ridge)	FW2-TM

OAK RIDGE RESERVOIR (Oak Ridge) - Northwestern tributary to Reservoir	FW1(tm)
OVERPECK CREEK (Palisades Park) - Entire length	FW2-NT/SE2
PACACK BROOK	
(Stockholm) - Source to Pequannock River, excluding Canistear Reservoir, except segments described separately below	FW2-NT
(Canistear) - Brook and tributaries upstream of Canistear Reservoir located entirely within the boundaries of the Newark Watershed	FW1
PASSAIC RIVER	
(Mendham) - Source to Rt. 202 bridge (Van Doren's Mill), except tributaries described separately below	FW2-TM
(Paterson) - Rt. 202 bridge to Dundee Lake dam	FW2-NT
(Little Falls) - Dundee Lake dam to confluence with Second River	FW2-NT/SE2
→     (Newark) - Confluence with Second River to mouth	SE3
TRIBUTARIES	
(Fairfield) - Tributaries within Great Piece Meadows	FW2-NT(C1)
PECKMAN RIVER (Verona) - Entire length	FW2-NT
PEQUANNOCK RIVER	
MAIN STEM	
(Vernon) - Source to confluence with Pacack Brook	FW1(tp)
(Newfoundland) - Pacack Brook to Hamburg Turnpike, (Bench Mark 257) in Bloomingdale except tributaries described separately below	FW2-TM
(Riverdale) - Hamburg Turnpike bridge to Pompton River	FW2-NT
TRIBUTARIES	
(Copperas Mtn.) - Entire length	FW2-TP(C1)
(Smoke Rise) - Entire length	FW2-TP(C1)
(Green Pond Junction) - Tributary at Green Pond Junction	FW1(tm)
(Jefferson) - Tributary joining the main stem about 3500± feet southeast of the Sussex-Passaic County line, near Jefferson	FW1(tm)
(Lake Kampfe) - Source to, but not including, Lake Kampfe	FW2-TM
(Lake Kampfe) - Lake Kampfe to Pequannock River, except tributary described separately below	FW2-NT
(Lake Kampfe) - Tributary within the boundaries of Norvin Green State Forest, originating west of Torne Mtn.	FW2-NT(C1)
FILES CREEK - Entire length	SE3
POMPTON LAKE (Pompton Lakes)	FW2-NT

**REFERENCE NO. 23**

**STATE OF NEW YORK**

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**OFFICIAL COMPILATION**

**OF**

**CODES, RULES AND REGULATIONS**

---

MARIO M. CUOMO  
Governor

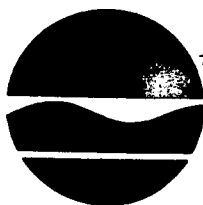
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GAIL S. SHAFFER  
Secretary of State

Published by  
DEPARTMENT OF STATE  
162 Washington Avenue  
Albany, New York 12231

**WATER QUALITY REGULATIONS**  
**SURFACE WATER AND GROUNDWATER**  
**CLASSIFICATIONS AND STANDARDS**

New York State  
Codes, Rules and Regulations  
Title 6, Chapter X  
Parts 700-705



**New York State Department of Environmental Conservation**

(5) Nassau County, including the waters of Long Island Sound between Nassau-Queens and Nassau-Suffolk county lines, and the waters of Atlantic Ocean to the three-mile limit between said county lines;

(6) the area within Suffolk County lying west of a north-south topographical limit line and its extensions, to a point in Long Island Sound at the New York - Connecticut state boundary line due north of Miller Place Beach and to Blue Point on the south mainland, thence southward across Great South Bay to Water Island, thence three miles due south to a point in the Atlantic Ocean at the south state boundary line;

(7) certain tidal waters which are within the Upper East River and Long Island Sound drainage basins within Queens, Bronx and Westchester Counties; and

(8) Jamaica Bay drainage basin within Kings and Queens Counties, and including Rockaway Inlet, east of a north-south line drawn from Light Inlet at the southeasterly tip of Coney Island Peninsula near Manhattan Beach to the westerly shoreline west of lookout tower on Rockaway Point.

(b) Said classes and standards of quality and purity applicable thereto are set forth hereinafter and designated Class I and Class II.

#### CLASS "I"

*Best usage of waters.* The waters shall be suitable for secondary contact recreation and any other usage except for primary contact recreation and shellfishing for market purposes.

##### Quality Standards for Class "I" Waters

Items	Specifications
1. Garbage, cinders, ashes, oils, sludge or other refuse.	None in any waters of the marine district as defined by Environmental Conservation Law (§ 17-0105).
2. Collform.	The monthly geometric mean total collform value for 100 ml of sample shall not exceed 10,000, and the monthly geometric mean fecal collform value for 100 ml of sample shall not exceed 2,000 from a minimum of five examinations. This standard shall be met during all periods when disinfection is practiced.
3. Dissolved oxygen.	Shall not be less than 4.0 mg/l at any time.
4. pH.	The normal range shall not be extended by more than one-tenth (0.1) pH unit.
5. Turbidity.	No increase except from natural sources that will cause a substantial visible contrast to natural conditions. In cases of naturally turbid waters, the contrast will be due to increased turbidity.
6. Color.	None from man-made sources that will be detrimental to anticipated best usage of waters.

Items	Specifications
7. Taste and odor-producing substances, toxic wastes and deleterious substances.	None in amounts that will interfere with use for secondary contact recreation, or that will be injurious to edible fish or shell fish or the culture or propagation thereof, or which in any manner shall adversely affect the flavor, color, odor or sanitary conditions thereof, or impair the waters for any other best usage as determined for the specific waters which are assigned to this class.
8. Suspended, colloidal or settleable solids.	None from sewage, industrial wastes or other wastes which will cause deposition or be deleterious for any best usage determined for the specific waters which are assigned to this class.
9. Oil and floating substances.	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease.
10. Thermal discharges.	(See Part 704 of this Title.)

#### Historical Note

Sec. amd. filed March 27, 1972; repealed, new filed: April 28, 1972; Feb. 25, 1974; amd. filed: Sept. 20, 1974; Sept. 20, 1985 eff. 30 days after filing.

#### 702.4 Class AA - Special (Upper Hudson River drainage basin).

#### CLASS AA - SPECIAL.

*Best usage of waters.* Any usage except for disposal of sewage, industrial waste or other waste.

##### Quality Standards for Class AA - Special Waters (Upper Hudson River drainage basin)

Items	Specifications
1. Floating solids, settleable solids, oil, sludge deposits, toxic wastes, deleterious substances, colored or other wastes or heated liquids.	None attributable to sewage, industrial wastes or other wastes.
2. Sewage or waste effluents.	None into waters of this class.

#### Historical Note

Sec. amd. filed March 27, 1972; repealed, new filed: April 28, 1972; repealed, filed Feb. 25, 1974 eff. 30 days after filing; provided, however, if the application, pursuant to Parts 800 to 941, inclusive, of Title 6, of any provision of Part 701 or 702 shall be found to be invalid, the corresponding provision of Part 701 or 702 in effect immediately prior to such effective date shall be deemed not to have been repealed and shall remain in effect until such time as the provision, the application of which was found to be invalid, can lawfully be made applicable.

TABLE I (cont'd)

<i>Item No.</i>	<i>Waters Index Number</i>	<i>Name</i>	<i>Description</i>	<i>Map Ref. No.</i>	<i>Class</i>	<i>Standards</i>
4		Lower New York Bay portion including Gravesend Bay	That portion of Bay south of The Narrows and bounded on north by line from tip of Fort Wadsworth to tip of Fort Hamilton; and bounded on south by line from south limits of Fort Wads- worth Military Reservation to Norton Point at western tip of Coney Island peninsula near Sea Gate, including Gravesend Bay.	S-23se S-24sw	I	I
5	LI 253	Coney Island Creek	Trib. of Gravesend Bay.	S-24sw	I	I
6		Upper New York Bay in- cluding The Narrows, Atlantic Basin, Gowanus Bay	That portion of Bay within New York bounded on south by line from tip of Fort Wadsworth to tip of Fort Hamil- ton; and bounded on west by shore of Staten Island north of tip of Fort Wads- worth, thence by north-south line across mouth of Kill Van Kull from northernmost point of Staten Island to easternmost point at Constable Point, Bayonne, New Jersey, thence by New York-New Jersey boundary line from mouth of Hudson River; and bounded on north by true east-west line passing through southernmost tip of Manhattan Island at the Battery	S-23ne S-23se S-24nw	I	I

TABLE I (cont'd)

Item No.	Waters Index Number	Name	Description	Map Ref. No.	Class	Standards
6 (cont'd)			and intersecting state boundary line, thence by line extending from same point at the Battery across mouth of Lower East River to western tip of pier 17 at Brooklyn; thence bounded on east by western shore of Brooklyn from pier 17 south to Fort Hamilton, excluding Erie Basin.			
6.1		Erie Basin	That portion of Upper New York Bay bounded on the north and east by the western shore of Brooklyn, on the south and west by the peninsula which separates the Basin from Gowanus Bay and Red Hook channel, including the outlet of the Basin; bounded on the northwest by a line from the northernmost point of the Basin peninsula to the point on the western shore of Brooklyn defined by the projection of Van Brunt Street.	S-23ne	SD	SD
7	LI 1 and tribs.	Gowanus Canal	Trib. of Gowanus Bay.	S-24nw	SD	SD

**REFERENCE NO. 24**

# ANALYTICAL REPORT

Findlay Laboratory, A Division of  
Environmental Testing and Certification Corp.  
16406 U.S. Route 224 East  
P.O. Box 1404  
Findlay, Ohio 45839-1404

 ETC - FINDLAY LABORATORY

CLIENT: USEPA Region II  
IMS  
Newark, NJ

ATTN: J. Copus  
John Shaw, OSC —

PROJECT NUMBER: 5763E

SAMPLE TYPE: Solid

## ANALYSIS PERFORMED:

Landfill Disposal Parameters

(Sample: AS)


DATE COMPLETED: 11/06/88

DATE RECEIVED: 10/26/88

This report is "PROPRIETARY AND CONFIDENTIAL" and delivered to, and intended for the exclusive use of the above named client only. Environmental Testing and Certification Corp. assumes no responsibility or liability for the reliance hereon or use hereof by anyone other than the above named client.

The analyses and data interpretation that form the basis of this report was prepared under the direct supervision and control of the undersigned who is solely responsible for the contents and conclusions therein.

Reviewed and  
Approved by:

  
R. J. Schock, Mgr., -ETC Findlay Laboratory

  
Date

PROJECT 5763ESUMMARY REPORT OF ANALYTICAL SERVICES1. INTRODUCTION

Environmental Testing & Certification Corp. (ETC) Findlay Lab., received 1 sample from O.H. Materials Corp. This sample was acquired by their technical personnel and transferred to the laboratory complete with a chain-of-custody record, a copy of which is attached for reference. This sample was and analyzed for Landfill Disposal parameters.

2. ANALYTICAL METHODOLOGYTotal Phenols

Samples were prepared and analyzed according to EPA Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, July 1982; Method 9065, Phenolics (Spectrophotometric, Manual 4-AAP with Distillation).

GC/MS Volatile Organic Analyses and Screens

Volatile analysis of the samples was performed using methods based on EPA Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, July 1982; Method 8240, GC/MS Methods for Volatile Organics.

GC/MS Semi-Volatile Organic Analyses and Screens

Acid and base neutral extractables were prepared and analyzed according to USEPA Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, July 1982, Method 8270, GC/MS Method for Semivolatile Organics. Extractions were performed by either Method 3540, Soxhlet Extraction or Method 3550, Sonication Extraction.

Density

Densities were determined by either ASTM Method D1298-90 for liquids or by Method 213E for solids, Standard Methods for the Examination of Water and Wastewater, 16th edition, 1985.

Total Solids

Solid samples were analyzed for Total Solids (TS) according to Standard Methods for the Examination of Water and Wastewater, 16th edition, 1985; Method 209F, Residue, Total, Gravimetric, Dried at 103°C-105°C.

PROJECT 5763ESUMMARY REPORT OF ANALYTICAL SERVICESBTU Content-Solids and Liquids

The BTU content of the samples was determined by either ASTM E711-81, Test Method for Gross Calorific Value of Refuse Derived Fuel (RDF-3) by Bomb Calorimeter, Section II, Vol. 11.04 or by ASTM D240-76, Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, Section 5, Vol. 05.01.

Polychlorinated Biphenyls and Organochlorine Pesticides

Solid samples are prepared and analyzed according to USEPA Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, 2nd edition, July 1982; Method 3550, Sonication or Method 3540 Soxhlet Extraction. Extraction and Method 8080, Organochlorine Pesticides and PCBs.

Total and Amenable Cyanide

Samples were prepared and analyzed according to USEPA Test Methods for Evaluating Solid Wastes, SW-846, 2nd edition, July 1982 (Revised April 1984); Method 9010, Total and Amenable Cyanide.

pH

Samples are tested for pH according to USEPA Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, 2nd edition, July 1982; Method 9041, pH Paper Method.

Sulfides

Sulfide analyses were performed according to EPA 600/4-84-038, Characterization of Hazardous Waste Sites-A Methods Manual, May 1984; Section 17, G.1.2. Determination of Sulfide in Solid Phase Hazardous Waste Disposal Site Samples.

Paint Filter Test

This test was performed on the samples in accordance with Method 9095, Paint Filter Liquids Test; USEPA SW-846, 2nd edition, July 1982, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods.

Flash Point (Seta-Flash)

Flash points were performed at 60°C according to the procedure specified in USEPA Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, 2nd edition, July 1982; Method 1020, Seta-flash Closed-cup Method.

PROJECT 5763ESUMMARY REPORT OF ANALYTICAL SERVICESRCRA ParametersMetals

Samples were prepared and analyzed according to USEPA Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, 2nd edition, July 1982. Samples were prepared by Method 3010, 3030, 3050, or 1310 as appropriate for the following metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Sample analyses for these metals were performed according to Method 6010, Inductively Coupled Plasma Method (SW-846 Proposed Sampling and Analytical Methodologies, 1984).

Pesticides

Solid sample leachates were analyzed for pesticides according to Standard Methods for the Examination of Water and Wastewater, 16th edition, 1985; Method 509A.

Herbicides

Solid sample leachates were analyzed for herbicides according to Standard Methods for the Examination of Water and Wastewater, 16th edition, 1985; Method 509B.

### 3. ANALYTICAL RESULTS

The following tables detail the results of the various analyses performed on sample #5763E-AS.

PROJECT 5763ETABLE 1 - LANDFILL DISPOSAL ANALYSIS

SAMPLE IDENTIFIER: Acid Solid  
ETC SAMPLE NUMBER: 5763E-AS

Parameter	Result
Color	Brown
Flash Point, SF, CC	> 95°C
Density	1.21 g/cm <sup>3</sup>
pH Test	1.80 pH units
Total Sulfide	< 10 mg/Kg
Total Cyanide	< 250 mg/Kg *
Amenable Cyanide	< 250 mg/Kg *
Total Phenols.	< 0.5 mg/Kg
Paint Filter Test	N/A
Total Solids	88.9% by weight
BUT Content	< 200 BTU/lb

\*Elevated limit of detection due to matrix interference  
N/A = Test not applicable

PROJECT 5763ETABLE 2 - VOLATILE ORGANICS

SAMPLE IDENTIFIER: Acid Solid  
 ETC SAMPLE NUMBER: 5763E-AS

Compound	Concentration (mg/Kg)
Acrolein	BDL*
Acrylonitrile	BDL*
Benzene	BDL
Bromomethane	BDL
Bromodichloromethane	BDL
Bromoform	BDL
Carbon Tetrachloride	BDL
Chlorobenzene	BDL
Chloroethane	BDL
2-Chloroethylvinyl ether	BDL
Chloroform	BDL
Chloromethane	BDL
Dibromochloromethane	BDL
1,2-Dichlorobenzene	BDL
1,3-Dichlorobenzene	BDL
1,4-Dichlorobenzene	BDL
1,1-Dichloroethane	BDL
1,2-Dichloroethane	BDL
1,1-Dichloroethene	BDL
Trans-1,2-Dichloroethene	BDL
1,2-Dichloropropane	BDL
Cis-1,2-Dichloropropene	BDL
Trans-1,3-Dichloropropene	BDL
Ethylbenzene	BDL
Methylene Chloride	BDL
1,1,2,2-Tetrachloroethane	BDL
Tetrachloroethene	BDL
1,1,1-Trichloroethane	BDL
1,1,2-Trichloroethane	BDL
Trichloroethene	BDL
Trichlorofluoromethane	BDL
Toluene	BDL
Vinyl Chloride	BDL
Total Xylenes	BDL

\*Limit of Detection = 1,000 mg/Kg ppm (parts-per-million)  
 Limit of Detection = 100 mg/Kg ppm  
 BDL = Below Detection Limit

PROJECT 5763ETABLE 3 - ADDITIONAL VOLATILE HSL COMPOUNDS

SAMPLE IDENTIFIER: Acid Solid  
ETC SAMPLE NUMBER: 5763E-AS

Compound	Concentration (mg/Kg)	Detection Limit (mg/Kg)
Acetone	BDL	500
2-Butanone (MEK)	BDL	100
Carbon Disulfide	BDL	100
Ethyl ether	BDL	100
Ethylene Dibromide	BDL	100
2-Hexanone	BDL	100
4-Methyl-2-Pentanone (MIBK)	BDL	100
Styrene	BDL	100
Tetrahydrofuran	BDL	100
1,1,2-Trichloro-1,2,2- trifluoroethane (Freon 113)	139	100
Vinyl Acetate	BDL	100

mg/Kg = ppm (parts-per-million)  
BDL = Below Detection Limit

PROJECT 5763ETABLE 4 - VOLATILE SCREEN RESULTS

SAMPLE IDENTIFIER: Acid Solid  
ETC SAMPLE NUMBER: 5763E-AS

<u>Compounds</u>	<u>Concentration (mg/Kg)</u>
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No chromatographic peaks were present with an area greater than 25% of the internal standards

mg/Kg = ppm (parts-per-million)

## PROJECT 5763E

TABLE 5 - BASE/NEUTRAL COMPOUNDS

SAMPLE IDENTIFIER: Acid Solid  
 ETC SAMPLE NUMBER: 5763E-AS

Compound	Concentra- tion (mg/Kg)	Compound	Concentra- tion (mg/Kg)
Acenaphthene	BDL	2,4-Dinitrotoluene	BDL
Anthracene	BDL	2,6-Dinitrotoluene	BDL
Benzidine	BDL	Diethylphthalate	BDL
Benzo(a)anthracene	BDL	1,2-Diphenyl hydrazine	BDL
Benzo(b)fluoranthene	BDL	Fluoranthene	BDL
Benzo(k)fluoranthene	BDL	Fluorene	BDL
Benzo(g,h,i)perylene	BDL	Hexachlorobenzene	BDL
Bis(2-chloroethyl)- ether	BDL	Hexachlorobutadiene	BDL
Bis(2-chloroethoxy)- methane	BDL	Hexachloroethane	BDL
Bis(2-ethylhexyl)- phthalate	BDL	Hexachlorocyclo- pentadiene	BDL
Bis(2-chloroiso- propyl)ether	BDL	Indeno-(1,2,3-cd) pyrene	BDL
4-Bromophenyl phenyl ether	BDL	Isophorone	BDL
Butyl benzyl phthalate	BDL	Naphthalene	BDL
2-Chloronaphthalene	BDL	Nitrobenzene	BDL
4-Chlorophenyl phenyl ether	BDL	N-nitrosodi-n- propylamine	BDL
Chrysene	BDL	N-nitrosodiphenyl- amine	BDL
Dibenzo(a,h)anthracene	BDL	Phenanthrene	BDL
Di-n-butylphthalate	BDL	Pyrene	BDL
1,3-Dichlorobenzene	BDL	1,2,4-Trichloro- benzene	BDL
1,4-Dichlorobenzene	BDL		
1,2-Dichlorobenzene	BDL		

Limit of Detection = 100 mg/Kg ppm (parts-per-million)  
 BDL = Below Detection Limit

PROJECT 5763ETABLE 6 - ACID EXTRACTABLE

SAMPLE IDENTIFIER: Acid Solid  
ETC SAMPLE NUMBER: 5763E-AS

Compound	Concentration (mg/Kg)	Detection Limit (mg/Kg)
4-Chloro-3-Methylphenol	BDL	100
2-Chlorophenol	BDL	100
2,4-Dichlorophenol	BDL	100
2,4-Dimethylphenol	BDL	100
2,4-Dinitrophenol	BDL	500
2-Methyl-4,6-Dinitrophenol	BDL	500
2-Nitrophenol	BDL	100
4-Nitrophenol	BDL	500
Pentachlorophenol	BDL	500
Phenol	BDL	100
2,4,6-Trichlorophenol	BDL	100

mg/Kg = ppm (parts-per-million)  
BDL = Below Detection Limit

PROJECT 5763ETABLE 7 - ADDITIONAL SEMI-VOLATILE HSL COMPOUNDSSAMPLE IDENTIFIER: Acid Solid  
ETC SAMPLE NUMBER: 5763E-AS

Compound	Concentration (mg/Kg)
Aniline	BDL
Benzyl Alcohol	BDL
4-Chloroaniline	BDL
Dibenzofuran	BDL
2-Methylnaphthalene	BDL
2-Methylphenol	BDL
4-Methylphenol	BDL
2-Nitroaniline	BDL
3-Nitroaniline	BDL
4-Nitroaniline	BDL
2,4,5-Trichlorophenol	BDL

Limit of Detection = 100 mg/Kg ppm (parts-per-million)  
BDL = Below Detection Limit

PROJECT 5763E

TABLE 8 - SEMI-VOLATILE SCREEN RESULTS

SAMPLE IDENTIFIER: Acid Solid  
ETC SAMPLE NUMBER: 5763E-AS

Compounds	Concentration (mg/Kg)
Unidentified	1,970

Limit of Detection = 100 mg/Kg ppm (parts-per-million)  
BDL = Below Detection Limit

PROJECT 5763ETABLE 9 - PESTICIDES AND PCBS

SAMPLE IDENTIFIER: Acid Solid  
ETC SAMPLE NUMBER: 5763E-AS

Compound	Concentration (mg/Kg)	Detection Limit (mg/Kg)
Aldrin	BDL	0.05
BHC-alpha	BDL	0.05
BHC-beta	BDL	0.05
BHC-gamma	BDL	0.05
BHC-delta	BDL	0.5
Chlordane	BDL	0.05
4,4'-DDD	BDL	0.05
4,4'-DDE	BDL	0.05
4,4'-DDT	BDL	0.05
Dieldrin	BDL	0.05
Endosulfan-alpha	BDL	0.05
Endosulfan-beta	BDL	0.05
Endosulfan sulfate	BDL	0.05
Endrin	BDL	0.05
Endrin aldehyde	BDL	0.05
Heptachlor	BDL	0.05
Heptachlor expoxide	BDL	0.5
Toxaphene		

POLYCHLORINATED BIPHENYLS

Aroclor 1016	BDL	0.5
Aroclor 1221	BDL	0.5
Aroclor 1232	BDL	0.5
Aroclor 1242	BDL	0.5
Aroclor 1248	BDL	0.5
Aroclor 1254	BDL	0.5
Aroclor 1260	BDL	

mg/Kg = ppm (parts-per-million)  
BDL = Below Detection Limit

PROJECT 5763ETABLE 10 - RCRA PARAMETERS

SAMPLE IDENTIFIER: EP Toxicity Leachate; Acid Solid  
ETC SAMPLE NUMBER: 5763E-AS

Compound	Concentration (mg/L)	Detection Limit (mg/L)
<u>RCRA Metals</u>		
Arsenic	0.119	0.1
Barium	2.04	0.1
Cadmium	BDL	0.1
Chromium	0.101	0.1
Lead	BDL	0.1
Mercury	BDL	0.05
Selenium	BDL	0.1
Silver	BDL	0.1
<u>Pesticides</u>		
Lindane	BDL	0.001
Endrin	BDL	0.001
Methoxychlor	BDL	0.02
Toxaphene	BDL	0.01
<u>Herbicides</u>		
2,4-D	BDL	0.01
2,4,5-TP	BDL	0.01

mg/L = ppm (parts-per-million)  
BDL = Below Detection Limit

PROJECT 5763E

QC SUMMARY

A. Total Phenols Analysis - % Recovery:

Method Spike	82.0
Calibration Spike	97.2

Total Sulfide Analysis - % Recovery:

Method spike	83.5
--------------	------

Total BTU Analysis - % Recovery:

Method Spike	99.4
Calibration Spike	98.0

Total Cyanide - % Recovery:

Method Spike	86.6
Calibration Spike	81.2

Total & Amenable Cyanide - % Recovery:

Method Spike	94.0
Calibration Spike	114

B. GC/MS Priority Pollutant Volatile Organics:

Calibration Files: see attached  
Surrogate Recoveries:

Sample Number	Benzene-d6	Bromofluoro- benzene	Toluene-d8
Blank	82.4	83.7	86.1
5763E-BNS	79.9	79.3	80.6
5763E-OXS	80.3	77.4	82.2
5763E-AL	91.4	91.2	90.5
Blank	94.8	94.4	92.9
5763E-AL	82.3	81.3	82.5
5763E-PS	85.4	82.2	84.6
5763E-AS	85.2	82.5	81.1
5763E-FOL	93.7	80.1	80.9

PROJECT 5763EQC SUMMARY (CONTINUED)

## Volatile Organics Spike % Recoveries:

Compound	Method Spike	Method Spike	6186-164 Mtx. Spk.	6186-164 Mtx. Spk. Dup.
Acrolein	104	101	*	*
Acrylonitrile	99.2	103	*	*
Benzene	104	103	102	107
Bromomethane	108	110	*	*
Bromodichloromethane	105	102	101	100
Bromoform	109	103	97.5	92.2
Carbon Tetrachloride	111	103	93.7	96.7
Chlorobenzene	110	102	92.9	96.7
Chloroethane	101	103	*	*
2-Chloroethylvinyl ether	103	106	102	102
Chloroform	103	101	99.7	105
Chloromethane	109	122	*	*
Dibromochloromethane	109	101	99.6	96.4
1,2-Dichlorobenzene	110	106	*	*
1,3-Dichlorobenzene	110	108	*	*
1,4-Dichlorobenzene	111	109	*	*
1,1-Dichloroethane	104	101	98.1	105
1,2-Dichloroethane	105	100	108	106
1,1-Dichloroethene	105	107	99.9	110
Trans-1,2-Dichloroethene	106	104	93.0	104
1,2-Dichloropropane	109	102	105	110
Cis-1,3-Dichloropropenes	106	102	99.0	101
Trans-1,3-Dichloro- propenes	106	103	98.8	95.5
Ethylbenzene	110	106	99.8	106
Methylene Chloride	109	106	83.2	90.6
1,1,2,2-Tetrachloroe- thane	109	103	96.6	97.4
Tetrachloroethene	112	107	90.1	94.8
1,1,1-Trichloroethane	108	104	99.5	100
1,1,2-Trichloroethane	107	104	103	102
Trichloroethene	108	103	98.3	99.1
Trichlorofluoromethane	112	116	95.8	99.6
Toluene	109	104	92.0	97.8
Vinyl Chloride	103	109	*	*
m+p-Xylenes (TOT.CONC.)	107	107	*	*
o-Xylene	108	107	*	*

\*Not used in spiking solution

PROJECT 5763EQC SUMMARY (CONTINUED)

## C. GC/MS Priority Pollutant Semi-volatile Organics:

DFTPP Tune File: see attached  
Percent Surrogate Recoveries:

Sample Number	2-Fluoro-phenol	Phenol d5	Nitro-Benzene d5	2-Fluoro-biphenyl	2,4,6-Tri-bromo-phenol
Blank	80.1	87.7	91.0	92.1	143
5763E-FOS	90.6	33.3*	93.1	95.0	130
5763E-AS	38.1*	45.7*	92.0	97.8	120
5763E-OXS	88.8	91.5	98.2	98.8	144
5763E-PS	66.4	70.3	98.5	100	139
5763E-BNS	90.2	92.4	85.0	96.8	147

\*Low recoveries due to matrix effects

## Semi-volatile Organics Analysis

## Spike Blanks, % Recoveries:

Compound	Method Spike
1,4-Dichlorobenzene	97.3
2-Chlorophenol	102
Phenol	103
N-Nitroso-di-n-propylamine	102
1,2,4-Trichlorobenzene	104
4-Chloro-3-Methylphenol	103
Acenaphthene	99.1
2,4-Dinitrotoluene	104
Lindane	99.4
Di-n-butylphthalate	99.0
4-Nitrophenol	106
Phentachlorophenol	109
Pyrene	105
4,4'-DDT	102

PROJECT 5763E  
QC SUMMARY (CONTINUED)

D. Pesticides and PCBs - Percent Spike Recoveries:

Compound	Method Spike	6003S-140 Mtx. Spk.	6003S-140 Mtx. Spk. Dup.
a-BHC	68.3	**	**
b-BHC	39.3*	**	**
Lindane	74.8	**	**
d-BHC	29.3*	**	**
Heptachlor	83.0	**	**
DDE	85.8	**	**
DDT	107	**	**
DDD	78.8	**	**
Endosulfan I	80.0	**	**
Aroclor 1248	84.8	89.6	95.6

\*Out of control

\*\*Not used in spiking solution

E. RCRA Pesticides/Herbicides

RCRA Pesticides - % Recoveries:

Compound	Recovery Data
Toxaphene	73.3
Lindane	78.2
Endrin	23.0
Methoxychlor	18.3

PROJECT 5763E  
QC SUMMARY (CONTINUED)

RCRA Herbicides - % Recoveries:

Compound	Method Spike	Matrix Spike	Mtx. Spk. Duplicate
2,4-D	61.0	61.0	50.0
2,4,5-TP	85.0	82.0	80.0

F. RCRA Metals - EP Toxicity Leachate % Recovery:

Compound	Method Spike	5763E-BNS Mtx. Spk.	5763E-BNS Mtx. Spk. Dup.
Arsenic	96.4	94.1	95.5
Barium	98.4	91.3	90.5
Cadmium	88.6	81.5	82.0
Chromium	94.2	88.7	85.6
Iron	96.0	88.0	92.0
Lead	93.6	87.9	85.8
Selenium	90.0	89.5	88.4
Silver	29.5*	**	43.4*

\*Out of control  
\*\*Not calculable

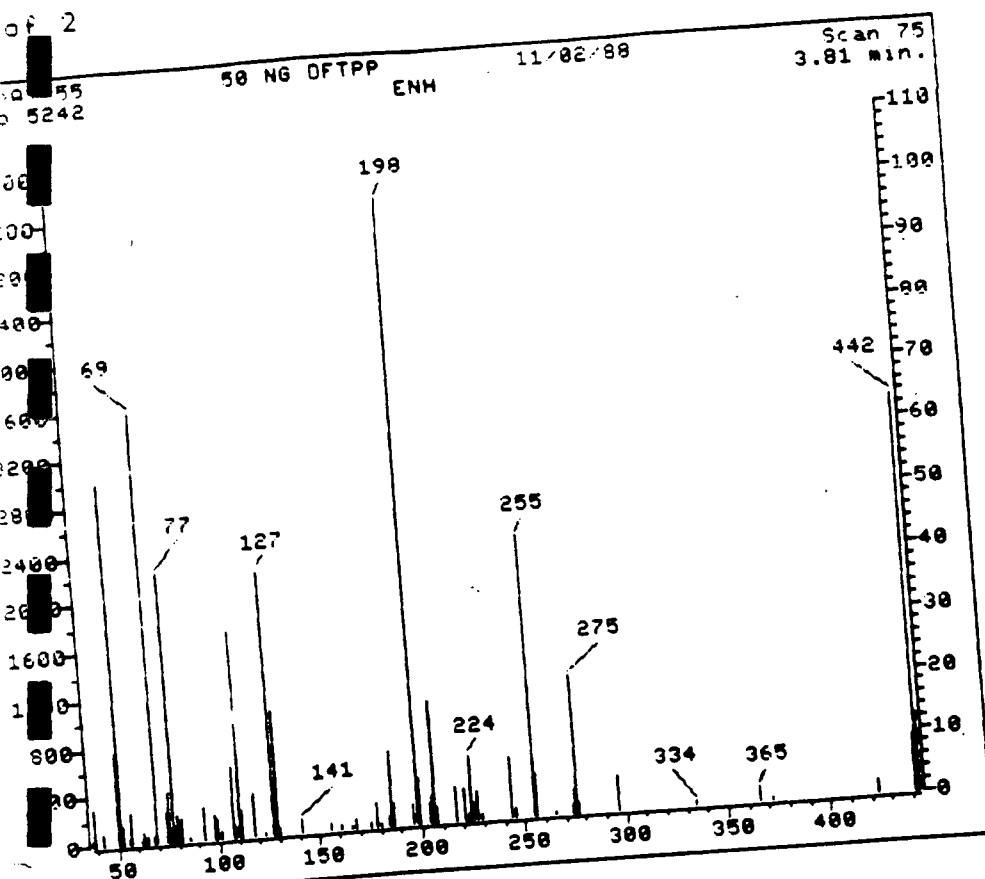


TABLE 2: METHOD PERFORMANCE DATA (QR23)

MS Tuning Data - Decafluorotriphenylphosphine (DFTPP) for Base/Neutral Analysis

Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
30-60% of mass 198	57.12	57.12	Ok
Less than 2% of mass 69 (reference only)	1.01	1.48	Ok
Less than 2% of mass 69	68.32	68.32	Ok
40-60% of mass 198	0.00	0.00	Ok
Less than 1% of mass 198	41.78	41.78	Ok
Base peak, 100% relative abundance	0.00	0.00	Ok
5-9% of mass 198	100.00	100.00	Ok
10-30% of mass 198	7.06	7.06	Ok
Greater than 1% of mass 198	21.81	21.81	Ok
0-100% of mass 442	2.32	2.32	Ok
Greater than 40% of mass 198	9.15	74.20	Ok
17-23% of mass 442	63.18	63.18	Ok
	12.33	19.52	

Injection Date: 11/02/88

Injection Time: 12:26

Run No: >A3555

Spectrum No: \_\_\_\_\_

Analyst: LR

Processor: LR

QC Batch: \_\_\_\_\_

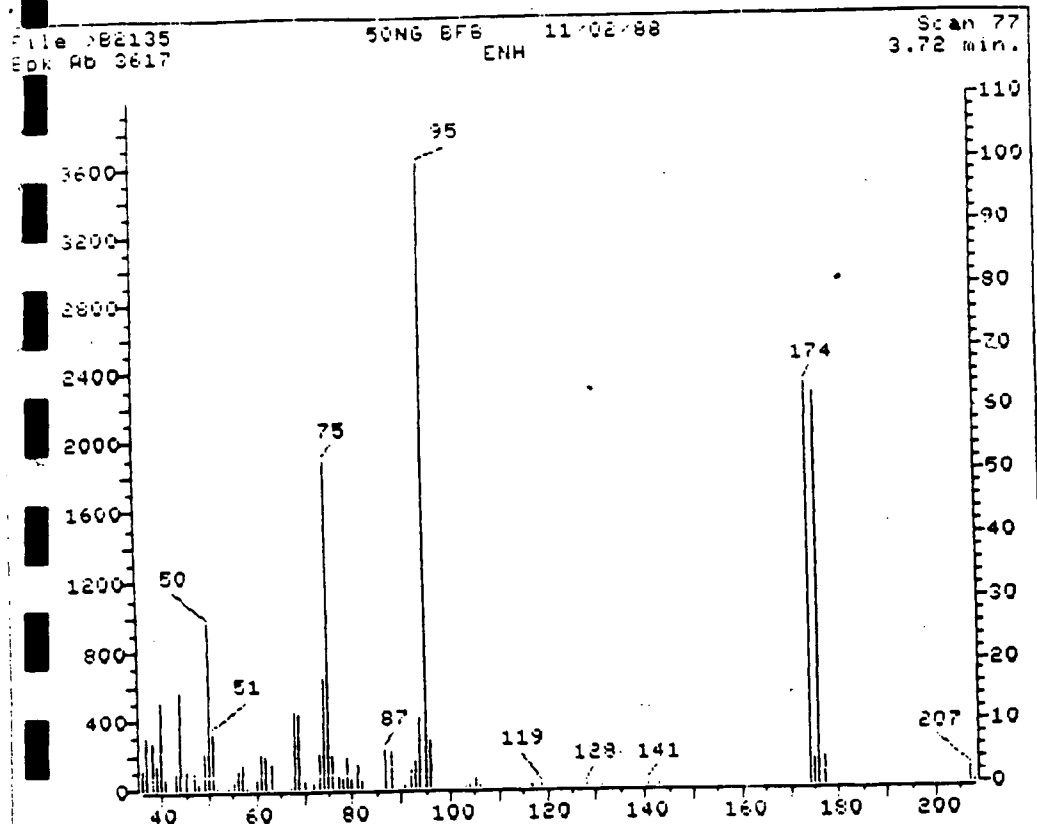


TABLE 2: METHOD PERFORMANCE DATA (QR21)

GC/MS Tuning Data - Bromofluorobenzene (BFB) for Volatiles Analysis

m/z	Ion Abundance Criteria	% Relative Abundance		Status
		Base Peak	Appropriate Peak	
50	15-40% of mass 95	26.46	26.46	Ok
75	30-60% of mass 95	52.17	52.17	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.47	7.47	Ok
97	Less than 1% of mass 95	0.00	0.00	Ok
174	Greater than 50% of mass 95	63.99	63.99	Ok
175	5-9% of mass 174	3.98	6.22	Ok
176	95-101% of mass 174	62.37	97.47	Ok
177	5-9% of mass 176	4.45	7.13	Ok

Injection Date: 11/02/88

Analyst: LR

Injection Time: 16:04

Processor: LR

Run No: B2135

GC Batch: \_\_\_\_\_

Spectrum No: \_\_\_\_\_

OHM

## CHAIN-OF-CUSTODY RECORD

Field Technical Services  
Rev. 03/98

No. 41405

O.H. MATERIALS CORP.

P.O. BOX 551

FINDLAY, OH 45839-0551

419-423-3526

PROJECT NAME <b>ERCS-IMS</b>		PROJECT LOCATION <b>Newark, NJ</b>	
PROJ. NO. <b>5763E</b>	PROJECT CONTACT <b>John Canton</b>	PROJECT TELEPHONE NO. <b>201-589-8392</b>	
CLIENT'S REPRESENTATIVE <b>John Shaw (OSC)</b>		PROJECT MANAGER/SUPERVISOR <b>Tim Brown</b>	

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)	REMARKS
1	5763-BNS	10/25/88	1400	X		Gray Solid - Bulk of Base/Neutral Solid Drums	1	X	
2	5763-FOL	10-25	1400	X		Brown Liquid - Bulk of Flammable <del>Drums</del> Liquid Drums	1		X
3	5763-FOS	10-25	1400	X		Gray Solid - Bulk of Flammable Solid Drums	1		X
4	5763-AL	10-25	1400	X		Yellow Liquid - Bulk of Acid Liquid Drums	1	X	
5	5763-OXS	10-25	1400	X		Brown Solid - Bulk of Oxidizer Solid Drums	1	X	X
6	5763-PS	10-25	1400	X		Brown Solid - Bulk of Peroxide Solid Drums	1	X	X
7	5763-AS	10-25	1400	X		Brown Solid - Bulk of Acid Solid Drums	1	X	X
8									
9									
10									

SOME PIECES ARE BLUE OR  
WHITE  
LIGHT GRAY-BROWN  
COLOR  
LIGHT GRAY-BROWN COLOR

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
1	1-7	<i>John Canton</i>	Fed-X			
2	1-7	Fed-X	<i>Larry Laneck</i>	10/28/88	1050	
3						
4						

SAMPLE'S SIGNATURE

A Subsidiary of Environmental Treatment and Technologies Corp.  
The Environmental Services Company

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